103

THE MIDWEST FLOODS OF 1993: FLOOD CONTROL AND FLOODPLAIN POLICY AND PROPOSALS

(103–57)

Y 4.P 96/11:103-57

The Midwest Floods of 1993: Flood C...

HEARING

BEFORE THE

SUBCOMMITTEE ON
WATER RESOURCES AND ENVIRONMENT

OF THE

COMMITTEE ON
PUBLIC WORKS AND TRANSPORTATION
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

OCTOBER 27, 1993

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Committee on Public Works and Transportation

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THE MIDWEST FLOODS OF 1993: FLOOD CONTROL AND FLOODPLAIN POLICY AND PROPOSALS

WEDNESDAY, OCTOBER 27, 1993

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT,
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION,
Washington, DC.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2167, Rayburn House Office Building, Hon. Douglas Applegate (chairman of the subcommittee) presiding.

Mr. APPLEGATE. Good morning. Today the Subcommittee on Water Resources and Environment begins hearings on the aftermath of the Midwest Flood of 1993.

During the first half of 1993, precipitation in the upper Midwest was one and a half to two times normal levels. In June, a stalled weather pattern resulted in historic amounts of rain. By late June, flood storage reservoirs were at or near capacity and soils throughout the area were very much saturated. Additional rainfall had nowhere to go except into the already swollen rivers and streams.

Over 17,000 square miles of farmlands, forests, homes and businesses were inundated. Between June 11 and July 11, parts of nine States were declared disaster areas.

Crop and property damages estimates, including highways, have soared to more than $15 billion—nine times as much, adjusted for inflation, as the record 1927 flood of the Lower Mississippi that led to a massive Federal effort to control its flow. As the floods recede and the damages can be more accurately assessed, the ultimate cost could be much higher.

The scope of the flooding in the Midwest has reopened the discussion concerning the difficult policy issues of the role of the Federal Government in providing flood control and in the area of Federal, State, and local management of floodplains generally. These issues include the effectiveness of structural and nonstructural flood control efforts, incentives and disincentives in Federal programs relating to flood control options, the extent to which government policies and programs encourage development in floodplains, and to what extent the structural flood control efforts may have exacerbated flood conditions.

There is an increasing realization that a balance must be struck between the environmental and economic interests along America's largest river system. Besides being subject to floods, these areas contain homes and businesses, recreation sites, fish and wildlife

habitats, commercial interests, historic districts, sources of power generation, and unique natural resources.

The witnesses we have assembled today bring wide-ranging experience and views on these very important questions. In addition, the subcommittee will be reviewing specific proposals which need to be acted upon now. These proposals deal with Federal assistance, hazard mitigation efforts, and proposals to initiate a broad review which is necessary to fully evaluate past, present and future floodplain management policies.

Before we begin with our very distinguished panel of witnesses, I want to yield to my very distinguished colleague from the great State of New York, the Ranking Republican Member of the subcommittee, Mr. Boehlert.

Mr. BOEHLERT. Thank you very much, Mr. Chairman.

The flood experienced by the Midwest this past summer was truly one of the devastating natural disasters to occur in the history of our nation. Thousands of Americans had their lives changed forever by the great flood of 1993.

Today's hearing will look at the role Federal programs and policies played in mitigating and in some cases contributing to the damages caused by the rising waters of the Mississippi. During the course of this hearing we will hear from the Corps of Engineers, the Soil Conservation Service, FEMA, the environmental community and several distinguished Members of the House.

I welcome all of you to our committee and thank you for providing us with your thoughts and insights on our flood prevention and response policies.

During this hearing we will discuss a number of fundamental issues relating to this summer's flooding. How can limited Federal emergency relief dollars best be used to minimize future flood damage? What role did man-made structures play in the flooding that occurred? Can better management play a significant role in preventing future flooding? What flood mitigation measures must absolutely be taken before next spring? Can interagency coordination on flood mitigation and response be improved? To what extent was ill-advised building on floodplains responsible for the damage that occurred?

I look forward to hearing from today's witnesses on all of these questions. And, Mr. Chairman, as we recall the great flood of 1993 and all the devastation and heartache that occurred, there are some bright spots, and I think particularly of a small town in my district, Davenport, New York, in Delaware County, a community of about 700 people, loaded a tractor trailer full of relief and goods and sent it out to Davenport Island, but before they did it, they talked with the people out in Davenport Island and said, "Our hearts go out to you. What can we send to you? What can we do to help?"

The mayor of Davenport Island said, "Here is what we need, here is what we would like, here is what we would appreciate." And the small community of 700 sent a tractor trailer of supplies to Davenport Island. What an expression that is of the American experience.

I look forward to hearing from our first panel particularly because not only are they good and respected friends but they are

people who had firsthand experience with this issue, and I think they will tell us a great deal.

Thank you, Mr. Chairman.

Mr. APPLEGATE. Thank you, Mr. Boehlert.

We also have sitting on our panel our very distinguished Chairman of the Investigations and Oversight Committee, Mr. Borski.

Mr. BORSKI. Thank you, Mr. Chairman.

I wish to commend you and Mr. Boehlert for moving quickly to hold this hearing. In my role as Chairman of the Subcommittee on Investigations and Oversight, I have enjoyed coordinating with you through the efforts of our two subcommittees to review past flood control practices and future action.

The Subcommittee on Investigation and Oversight will hold a hearing tomorrow on the response of FEMA and other Federal and State agencies on the Mississippi River flooding. We also intend to conduct a more intensive review of our overall flood control policies.

The Congress held its first hearing on the Mississippi River levee system in 1913 and we are still here today trying to figure out the solution. I hope we are closer to the end of the process than to the beginning.

Finally, Mr. Chairman, I wish to make two points. First, the time has come to look at the entire issue on a comprehensive and all-inclusive scale. The events of this summer show that a piecemeal, patchwork, project-by-project approach is no substitute for a comprehensive, long-range policy.

Second, while the summer of 1993 will long be remembered as a time of disaster, we have an opportunity. All levels of government are now focused on the issue of best way to provide flood protection. It is essential to remember, Mr. Chairman, that while we were working on our long-range plans, there are thousands of people who are looking to us for immediate help. Those issues cannot be forgotten in our debate over flood control policy.

Thank you, Mr. Chairman.

Mr. APPLEGATE. I thank the gentleman from Pennsylvania.

We will now recognize the gentleman from the great State of Missouri, Mr. Emerson.

Mr. EMERSON. Mr. Chairman, thank you very much.

I appreciate the fact that we are holding this hearing today. I have a statement I want to make, but I also don't want to delay the panel that is before us today. I see I am being urged by my colleague from Missouri. I feel like I should be really sitting down with the panel, because their concerns and my concerns are in accord. But let me, if I may, take this time.

I do represent a district that has been adversely affected, as has the districts of our colleagues at the table. Mr. Chairman, the Mississippi is well worth reading about. It is not a commonplace river. On the contrary, it is in all ways remarkable. Those words of Mark Twain which were written more than a century ago are still true in this modern day and age.

I urge my colleagues on this panel, our distinguished guests who are going to testify today, and anyone else interested in flood control to please read Life on the Mississippi. Mark Twain had indeed a unique perspective on one of our nation's most important navigable waters, and in that book he shares his viewpoint from 1883

that remains applicable in managing the Mississippi and its tributaries here in 1993 and beyond.

I commend this subcommittee for convening this hearing on such an important matter of national significance. As a Member of this panel and one who represents the congressional district in southern Missouri, the borders of Mississippi, I want to share some of my thoughts and concerns about what I believe the Federal Government should do in the aftermath of the great flood of 1993.

First and foremost, I want to give credit where credit is due. I think that the Federal Emergency Management Agency and the Federal Government in general responded very expeditiously in the midst of high waters and the tragic flooding. These folks made sure they were doing what they could at that time to mitigate the severity of such a disastrous situation, and I believe these efforts deserve proper recognition and should be applauded.

Now, however, we, as the United States Congress and the Federal Government, must take the next step in continuing to help flood victims recover from this most recent episode, and then in our long-range outlook temper the effects of future floods along the Mississippi and its tributary system.

We know full well from other natural disasters that our country has experienced, the Federal Government cannot prevent Mother Nature from wreaking her havoc, but hopefully we can mitigate the consequences.

As one of two Members who serves on both the Public Works Committee and the Agriculture Committee, I want to convey a few of my grave concerns about what the ultimate effect of drastic changes in our national flood control policy or strategy could be on American agriculture in our rural towns and communities.

Specifically, I am vitally concerned about movements afoot to revert prime farmlands along the Mississippi and its tributaries to pristine, never-to-be-touched-again wetlands under the guise of so-called environmental enhancement. In other words, it sounds like something that is right up the sleeve of environmental elitists, professional preservationists who want to dictate key land management policies.

American agriculture and many other industries rely very heavily on our Nation's river system to transport their goods. That is so our fellow citizens can enjoy the most affordable food and fiber around the globe. In fact, 30 percent of all of Missouri's total products are destined for export and mostly by way of the Missouri and Mississippi Rivers. And of the top 10 soybean-producing counties, eight are in the floodplain of the Missouri and Mississippi, with four of the eight in the region of the State that I represent.

This helps illustrate the importance of why this subcommittee, this Congress and the Federal Government has got to be prudent in determining the flood control policy, and not with a broad-brush stroke overcome apparent obstacles simply by reverting these effective territories back to wetlands. I hope common sense is going to be our guide in the matter of flood control.

One policy that I want to call to the attention of this subcommittee has been put forth by our Missouri colleague in the Senate, Senator Bond. I think his initiative to help rebuild our Nation's levees breached or washed out during this past summer's flooding, all

in an attempt to reduce and hopefully prevent future damage and destruction.

Specifically, the Bond language already approved in the Senate's DOD bill reinstates an Army Corps of Engineers policy allowing publicly sponsored levees into the Federal program to receive assistance with rebuilding, overturning the current administration's opposition.

I urge my colleagues to keep in perspective what we are dealing with regarding future flood control and how that compares to this most recent flood. Most weather experts say the flood of 1993 is the type that only happens every 500 years. That is right. Once in every five centuries. So when we proceed here I want to caution us that we should be—the Federal Government should be comprehensive but not outlandish in the solutions to water management and flood control.

Our levee system can and does work under most circumstances. We shouldn't discard our efforts made over the past 70 years because of what happened this past summer in a flood that was truly of biblical proportions.

The movements by some who want to focus on not rebuilding our ever important levees and instead to allow unprotected farmland to return to wetlands is not acceptable. It might work if all farmers in an unprotected area decided to sell their land to the Federal Government, but as one of my constituents questioned, what if only a few decided to sell? Would the rest of the farmland and the protected area be allowed to become a wetland every time the river gets above flood stage?

I support voluntary programs such as the emergency wetland reserve program being developed by the Soil Conservation Service, which provides a viable management option for agricultural lands which were damaged heavily by the flood. Similar to the current wetlands reserve program, this is a voluntary program in which landowners receive a payment in exchange for a permanent easement. Eligible lands are converted into wetlands and owners maintain control of the land, and there is no required public access.

Moreover, any type of program needs to provide some type of payment in lieu of taxes in the local county governments in a manner similar to the land purchase program of the Missouri Department of Conservation. No county government can have several thousand acres taken off its tax rolls and still provide reasonable services to the remaining citizens.

Today I hope this subcommittee will listen closely to the merits of a couple of legislative approaches. One is put forth by my friend and colleague Congressman Volkmer, who is at the table before us. He has a cost-effective program in relocating flood victims. Another one is offered by my friend across the river in Illinois, Richard Durbin, also before us, which urges flood control measures on the Upper Mississippi Rivers and its tributaries.

I think both these measures are good and deserve our close look. I have already committed my support and I hope the subcommittee may be brought in that direction also.

The regions represented by Mr. Volkmer and Mr. Durbinwere very significantly hit and impacted by the 1993 floods. And both of these gentlemen have spent much time in their districts listening

to constituency problems and personal situations arising out of the flood, and they have brought forth in these bills some well-thought-out, workable solutions to our problems.

As an original cosponsor of both of these measures, I want to urge this panel's closest attention, full consideration, and I hope swift approval.

In closing, the basin of the Mississippi is the body of the nation. As the editors of Harper's magazine articulated so well more than a century ago, back in 1863, "Latitude, elevation and rainfall all combine to render every part of the Mississippi Valley capable of supporting a dense population. As a dwelling place for civilized man, it is by far the first upon our globe."

The knowledge put forth by Harper's and Mark Twain should not be forgotten as we deliberate here today and throughout this Congress. National problems warrant national solutions. And the Mississippi River, while it is one of our vital, natural and national resources, is also a national problem when it does things like it did this summer.

Our Federal flood control policy and water management should reflect the complexity of our inland waterways, and their impact on our nation's citizens and their livelihoods. We can't be shortsighted by implementing emotionally based policies in light of recent flooding that could jeopardize a system of flood control that has worked well for over a half a century.

Thank you, Mr. Chairman and Mr. Boehlert, for holding these hearings in a timely manner. I look forward to hearing the testimony of our distinguished witnesses, and I thank all of you for your indulgence in listening to me with this lengthy statement.

Thank you.

Mr. APPLEGATE. I thank the gentleman from the great State of Missouri.

We are very honored to have with us the Ranking Member of the full committee, Mr. Bud Shuster of Pennsylvania.

Mr. SHUSTER. Thank you very much, Mr. Chairman.

I simply have one point that I would like to make and emphasize. It has to do with the Corps of Engineers. Over the years I have developed a tremendously high regard for the Corps of Engineers, and am one of their biggest supporters. I discovered, though, that some of my colleagues have expressed some concern about the corps not being responsive to congressional intent. In fact, they have in the process reflected this by cutting some appropriations for the corps, as this is working through the appropriations process this year.

As recently as last night I had a meeting with several of my colleagues on this particular issue, and I am hopeful that we are going to be able to restore some, if not all of those cuts. So I am very happy to go to bat for the corps, as I know many of us are.

I am concerned, however, that if next year our colleagues still have this feeling, it is going to be very, very difficult, if not impossible for us to restore cuts that I am certain will be there as next year's appropriation process goes through. So I simply want to communicate this as strongly as I can.

I think those of us who support the corps have some work to do with the corps to make sure that all of our colleagues join us in recognizing the outstanding work that the corps does.

Thank you, Mr. Chairman.

Mr. APPLEGATE. Thank you very much, Mr. Shuster.

We also have Mr. Hamburg and Mr. Barcia, Members of the committee, to join us. Do either of you have opening statements at this time?

Mr. Barcia.

Mr. BARCIA. Yes, Mr. Chairman, for a brief statement.

I would first of all like to thank you for holding this subcommittee hearing on this very important issue that the Nation is confronting, and say that all Americans were pained by the horrifying daily reports on the flooding in the Midwest this past summer.

The flooding on the Mississippi and its tributaries has been one of the most significant national disasters in this century. There will be a wealth of data created and lessons learned that should not be lost due to inattentiveness to the value of information.

I am happy our committee and this subcommittee is taking the lead in seeking to gain something positive out of this tragedy by studying the national, personal and commercial effects of the floods, our response and relief efforts, and what information might be taken from this event, and disseminated to the appropriate Federal, State and local institutions.

I believe the flooded rivers are a natural laboratory from which we can learn how to prepare for similar disasters in this and other areas of the country. We should take advantage of existing resources which can help us extrapolate from this and past experiences to improve our response to recent and future tragedies.

Our goal must be to learn from such experiences and more effectively and expediently address natural disasters and their aftermath to make them less damaging, less fatal, and shorter in duration.

I thank you, Mr. Chairman, and Chairmen Mineta and Borski, for offering us an opportunity over the next two days to ease such suffering in the future.

[Mr. Barcia's prepared statement follows:]

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Opening Statement
Honorable James A. Barcia

Hearing of the Water Resources and Environment Subcommittee
October 27, 1993

MR. CHAIRMAN, all Americans were pained by the horrifying daily reports on the flooding in the Midwest this Summer. The flooding on the Mississippi and its tributaries has been one of the most significant national disasters of this century. There will be a wealth of data created and lessons learned that should not be lost due to inattentiveness to the value of information. I am happy that our Committee is taking the lead in seeking to gain something positive out of this tragedy by studying the natural, personal and commercial effects of the floods, our response and relief efforts, and what information might be taken from this event and disseminated to the appropriate federal, state and local institutions.

I believe that the flooded areas along the rivers of the midwest are a natural laboratory from which we, as a nation, can learn how to prepare for similar disasters in this and other areas of the country. We should take particular advantage of existing resources which can help us extrapolate from this and past experiences to improve our resonse to our most recent and future tragedies. Our goal must be to learn from such experiences and more effectively and expediently address natural disasters and their aftermath to make them less damaging, less fatal and shorter in duration.

I thank you, Mr. Chairman, and Chairmen Mineta and Borski for offering us an opportunity over the next two days to ease such suffering in the future.

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Mr. APPLEGATE. I thank the gentleman.

Mr. Hamburg, do you have any opening statement?

We are also very honored to have our very distinguished Chairman, who is in consultation with the Ranking Member, with us today.

The Chair of the full committee, Mr. Norm Mineta.

The CHAIR. Thank you very much, Mr. Applegate. I want to commend you and Mr. Boehlert for your leadership in holding these hearings.

There is no question that the Midwest floods of 1993 swept a great deal down the river. And one of the things swept away may have been some of our assumptions about flood control policy. It is time to reconsider our approach to flood control.

The major lesson of this disaster is never to underestimate nature. As the committee considers legislation to ease the burden of those who have suffered during the floods of 1993, we must be cognizant that man has only a finite ability to bend nature to our will.

Many hydrologists have argued for years that separating the river from its floodplain has robbed the river basin of its natural ability to accommodate floods. If we were to utilize the river basin's ability to moderate floods, we would be able to live more in harmony with the Mississippi and the Missouri and to suffer less during times of high water.

Of course, in urbanized areas, structural levees are a necessity to protect lives and property. In other areas, land use changes over the years will make it very difficult economically to try nonstructural approaches, but in many rural areas, nonstructural alternatives may make sense both for the affected people and for the long-term interests of our Nation's taxpayers.

The Clinton administration has in place a policy to consider these alternatives. We look forward to the comments of the witnesses on these alternatives.

Many towns in the Mississippi and Missouri floodplains have suffered repeatedly from floods. Some towns have had 100-year floods twice in the last several years. Two hundred communities have approached the Federal Government about relocations out of the floodplains to higher ground. And we will be looking for the advice of the witnesses today on how we can quickly assist those towns that desire to move out of harm's way.

Another issue the committee needs to address is the question of a comprehensive plan for the Upper Mississippi. The Lower Mississippi has been subject to a comprehensive plan since the great flood of 1927. The great flood of 1993 should be the impetus to consider a comprehensive approach to the Upper Mississippi, not just for flood control but for all the uses of the river.

Again, I want to thank my very fine colleague from Ohio and subcommittee Chairman, Mr. Applegate, and the Ranking Minority Member of the Subcommittee on Water Resources and Environment, Mr. Boehlert of New York, for holding these hearings today. And I look forward to the testimony of the witnesses.

Thank you very much.

Mr. APPLEGATE. Thank you very much, Chairman.

And now we can get down to what we are all here about. First of all, we have some very distinguished Members, and number one

on the list that we have right now, not necessarily is he the most distinguished—but perhaps he is, too—he is number one in seniority. We will recognize the Honorable Neal Smith.

TESTIMONY OF HON. NEAL SMITH, A REPRESENTATIVE IN CONGRESS FROM IOWA

Mr. SMITH. Thank you very much.

I appreciate your holding these hearings. I will not talk about the substance of the two bills which I happen to also have been permitted to coauthor, but the principal authors will do that. I just want to make a few very, very brief remarks overall.

I came here 35 years ago. At that time this committee was way ahead of the curve in passing flood control legislation. A lot of legislation was passed in the first 10 years I was in the Congress. The first year I was here, for example, we appropriated the money for the first flood control reservoir, the Des Moines Parkway Lock and Dam, and a lot of work was done in the following 10 years, levees and dams and different kinds of structures.

This committee should be commended for all that it did nationwide during that period. But in the last 15 or 20 years, we have been using up the benefits of that great thrust that was made back in those years. Too many people have taken for granted that they won't have another flood because they have been protected by those structures.

I want to say there is no question whatever the great damage this year would have been a lot worse had it not been for those structures that were built 25, 30, 35 and 40 years ago. They helped a great deal. All you have to do is look at the number of lives that were lost—there were virtually none in this country. To have a flood in India or somewhere, they lose 100,000 lives. These projects have helped.

Since 1977, when I authored the SBA Flood Control Act as a companion to FEMA legislation, I have been going to these flood areas. And I want to say this, too. The Corps of Engineers, FEMA, and SBA worked together better in the 1993 floods than they ever have. They have finally gotten their act together.

However, a lot has happened since we built those flood control structures. It has happened upstream. We are putting more water into these little river gorges than was ever intended for that much water. This goes clear back to Johnstown in Pennsylvania, which is the first one after we passed the SBA act that I happened to go up and look at.

The people upstream cause a substantial portion of these problems. Then they say, Why don't those people downstream move out? That is about what has been going on, the last 20 years at least.

We need at this point, I think, both a temporary program and a long-term program. We need a temporary buyout program immediately so we can better off-set some of the damage that has already been done. Then we need a long-term buyout program that will work automatically between floods so you don't wait until there is a disaster before implementing a buy out, something like the FAA has for a long-term program.

I think that we also need to coordinate with local governments who are causing some of this problem by not doing more than they have been doing to control the additional runoff. In the Des Moines area, we have already had a meeting of 28 of the local governments, working together to see what they can do.

The Corps of Engineers does a good job, I think, of coordinating their entire structures and their entire system of dams on the Mississippi River and on the Missouri River and their tributaries. They know when the water falls in Minnesota, when it will reach St. Louis. What we don't have is any coordination whatever with local governments. They should have some local areas where local governments hold back water in retention basins and coordinate that with the corps.

In many instances, a local government may have an airport, for example. They can have a catch basin at the airport. It won't happen every year, but when there is a flood on the Mississippi River or on the Missouri River or on the Des Moines River, they could close the value to the outlet, they should not be putting their water off of the airport into a storm sewer and getting it down to the river as fast as possible. That is what they do. They build a new shopping center, put a storm sewer in and get it down to the flood area as fast as you can. It reaches there exactly the wrong time.

Whenever they have a new building, there should be a catch basin that offsets the run-off from it. Somebody can pay another $1 a month for the storm sewer cost. It wouldn't be every year. But we need a long-term plan so that local governments control their own overflow during those years when there is a minor flood, and coordinate that with the corps. There is no structure for doing that at the present time.

That is about all I have to say, Mr. Chairman.

Mr. APPLEGATE. Thank you very much, Neal. I think that in your short time you have said a lot. And I appreciate that.

Next we have one of our very favorite Members, Harold Volkmer from the very historic town of Hanibal, who has doggedly been on my tail to set up these hearings and he has pushed very strong for the Mississippi flooded area. I give him a greet deal of credit for the tireless work he has done in this.

Mr. Volkmer.

TESTIMONY OF HON. HAROLD L. VOLKMER, A REPRESENTATIVE IN CONGRESS FROM MISSOURI

Mr. VOLKMER. Thank you, Mr. Chairman.

I first ask that my prepared statement be made part of the record.

Mr. APPLEGATE. Without objection.

Mr. VOLKMER. I will not go through that statement, but I would like to just talk to you a little bit about the problem as I have seen it and as it has developed in my mind.

But before I do that, lest I forget, I first want to let everybody know that I also support the gentleman from Illinois's legislation that looks forward to the future to take care of floods in the future. And also, lest I forget, I think it is very important that we remember to thank the Corps of Engineers for all the work that they did

during this flood. Without them, things would have been a lot worse.

I think I need to thank the National Guard, both in Missouri, Iowa, Illinois, everywhere. As many of you may or may not know, we had more National Guard helping us with this flood and the flood problems than served in Desert Storm. And they did an admirable job. Without them I don't think we would have come through as well as we did. Then there are people like the Red Cross and the Salvation Army, people from all over the country that helped us out there. And we appreciate that.

I can remember a time when one of my towns, when I was up there, going over the situation—by the way, it is the only town that the levee held on the Mississippi River in my district, and there are people there that had been traveling North on 196, going back to South Dakota, the whole family. As they traveled, they were listening on the radio, they helped sandbag. This is the kind of thing—they helped from all over the country, and we appreciate that.

As this flooding was occurring, and I saw that water began to creep up, through the summer, it was almost unbelievable, as it occurred. My hometown is on the Mississippi. As you know, I am from the land of Mark Twain, and we are right there, but I also have the Missouri River, a good part of it in my district, so I have had flooding on both, and to give you some ideas, these waters came up, the first town to hit, of course, was Alexandria, which is the northeast corner of my district, right at the mouth of Des Moines River where it comes in. The levees broke there first. Then we had La Grange, then eventually West Quincy, Louisiana, down the Mississippi, and on the Missouri River, Marthasville, Cedar City.

And as this occurred, going over it with my staff, it took time from communities trying to help fight the floods. I flew over some of the first breaches in the levees, and when I saw Alexandria—and all you could see of Alexandria were rooftops, that is all, businesses and homes, that is all you could see, 12 feet of water.

What are we going to do when this is all over? So we started looking at the alternatives. And the alternative for a buyout program—first, there was none, really, unless you had flood insurance, and very few people have flood insurance. And for others it wasn't there because the program that was in existence called for a 50/50 match. And the communities couldn't afford it. And as we talked to the communities, they said, We can't afford it, we can't do it.

So we started working with James Lee Witt and FEMA and drafted the legislation you have before you. We introduced it around I think the last day we were in session, back in August, before we broke. And since then, I have worked with my communities and with my people.

I would like to tell you a little story. About two weeks ago, on a Saturday, when I was out in my district, we were up in Alexandria. In Alexandria, there isn't a home there after that flood that is livable, not one. Not one business. As we drove around in the mud, because it just rained the night before, and the whole town is covered with mud because of silt from the river, I noticed a young boy, I guess about 10 or 11, playing in the backyard of one of the homes. It had a fence around it.

So I told the person with me, one of my staff, Let's drive over there and see who we can talk to. We went over there. The gentleman there by the name of Ed Smeltger. Ed works full time through the week, through the night. Since he has been in, the water has gone down now about a month. He is in the process, he had already ripped off all the drywall inside that house, taken out all the insulation, taken out all the flooring and everything, because his home was still sound in its foundation. It is a fairly modern ranch-style home.

We talked to him a little bit about the buyout. He says he is going to quit working. He, by the way—in other words, he is going to quit working on that house. He wants a buyout. Most of the people that I have talked to in all these communities that have been flooded would like to have a buyout.

Gentlemen, this gives us the opportunity, I think we are almost—I say almost missing it, because a lot of these people don't know what to do. They want—they have to make a decision whether to move in and fix up or do something. Some of them are living in temporary housing, through the courtesy of FEMA. We have mobile homes up there. Others are living with relatives or friends or other places. But they haven't been in their homes, a lot of them, since July.

And they don't know whether or not there is going to be a buyout program or not. They don't know whether they are going to move back in or not.

Maybe I can digress just a minute because I think you should know too what else—some of the things that are going on. One of the things I mentioned, the town of Cedar City isn't Cedar City anymore, but the capital of Jefferson City, Missouri, some years ago, it is now known as North Jefferson City. It was completely flooded just like Alexandria. There isn't a house there anybody can live in here.

Back in September, the City of Jefferson thought they would try a buyout on their own, so they rearranged some of their budget figures, and they came up with enough money that they could pay the people there 20 cents on the dollar.

Well, gentlemen, to me that is really kicking people when they are down. You are telling them you are going to buy their property and you are only going to give them 20 cents on the dollar. These people are already hurting. These are not, by the way—these people that I am talking about in my district, I don't know about the rest of them, as far as their places are concerned, but these people are not even—most of them are not even what I call medium-income people. These are low-income people. The reason many of them live in that floodplain is because that is all they can afford.

If you are interested, I would like to share with you, in my own hometown of Hanibal, where we have approximately 75 homes in the floodplain, they are not covered by the flood wall that we have because monetarily it couldn't be done. A lot of these homes down there are probably worth anywhere from $8,000 to $12,000. You might run up to, on some in Cedar City and in my hometown, you might run up some, $30,000 to $40,000. The average, somewhere around $12,000 and $15,000. You might run the same—about the same in Alexandria and other places.

So it isn't the fact that these are mansions or well-to-do pieces of property. They are not. And a lot of this property, by the way, was flooded in 1976, 1973, 1986, as well as 1993.

I have had meetings with these people, and most of them, the vast majority of them, would like to move out. And under our legislation, what we are proposing, to change that formula from 50/50 to 75/25, and working with FEMA and talking with my Governor and my State Office of Economic Development, they have sufficient funds to permit these towns like Alexandria—Alexandria doesn't have a penny to match any money with. The State has some community block development grant money, and with that money the citizens of the city can do it.

And once that property is purchased, then it is torn down, demolished, and under this legislation no structures, no four-wall structures can be built in that area ever again. Even though it is a voluntary program over time, this area that now causes a lot of heartache and difficulties for people, will become basically a green area. Some could be made into, if it is appropriate, ball fields or parks, or just plain green area, picnic tables and what have you. But I envision that we will no longer be facing the problem of having these people flooded out.

So with that, I can only urge we act as expeditiously as possible, because these people have had a real rough time. There is a lot of despair out there.

And by the way, I will take just a minute more to tell you, on the Mississippi basically we had flooding like Alexandria. When they got flooded, it stayed up there all the way from July the 8th up to the time of September, before it went down. That tells you how long.

Let's take the town of Herman, Missouri. Herman, Missouri is a German-American community, it has a lot of history to it. By the way, I was just there last Sunday. Those people didn't get flooded one time. They got flooded three times. Three times on the Missouri, because the Missouri went up and got so high, and then it went down, and then it came back up, not quite as high as the first time, and then it went down.

But then it came up a third time and it went way up. In between, people had gone in their home and cleaned up and tore out, got ready to go back again, and then she came back again. That caused a lot of despair, folks. And there are people in Herman who would like to have a buyout right now.

Thank you very much.

Mr. APPLEGATE. We are honored to have with us the very distinguished Majority Leader of the United States House of Representatives, Dick Gephardt, who also represents Missouri, a part that has been devastated by the flood.

Mr. Gephardt.

TESTIMONY OF HON. RICHARD A. GEPHARDT, A REPRESENTATIVE IN CONGRESS FROM MISSOURI

Mr. GEPHARDT. Thank you very much, Mr. Chairman. I appreciate the opportunity to be here, and I thank the committee for expeditiously taking up this important legislation.

I want to commend my colleagues at the table, in particular Congressman Volkmer, for the effort that has gone into putting this legislation together, and I want to thank you, Mr. Chairman, and Mr. Mineta, and all of the Members of the committee, for taking the time to look at this very important issue.

I will not elaborate further on the facts. I think Harold and the others will give you a real sense of what happened in our districts, and clearly this was the greatest flood event in any of our lifetimes, and hopefully in the country's lifetime. We will not see something of the magnitude or the duration of this event.

And I guess I just give you one anecdote that many of you saw during the period when the rivers were up. I flew in a helicopter over the confluence of the Missouri and Mississippi Rivers at the height of the flood. That confluence is right near Jim Talent's district, probably includes a lot of it, and Dick Durbin's district, and it is just north of where my district is and obviously a little south of where Harold's district is.

If you measure from one end of the water to the other at that point, it was about 20 miles of water where the two rivers come together. And obviously in that 20 miles of water was farmhouses, cities, and all manner of human activity. That gives you a sense of the magnitude of this event. And it went on for days and weeks and months.

We are really asking in this legislation for two basic things. First, to strengthen the immediate Federal response, and to do that, to give us program flexibility. That is really what we need. We are not asking for new money. We are asking for flexibility in the FEMA program so that these funds can be added to community development funds and private funds and State funds and local funds, so that there can be a greater ability on the part of local governments to cobble together a meaningful buyout program so that we exercise real mitigation, we try to get these people out of floodplains so this problem doesn't happen again.

We all know there is not enough money to buy everybody out. We understand that. All we are asking is that there be some more flexibility in terms of the Federal-State match and in terms of the use of these FEMA funds so that creating local jurisdictions can put together meaningful buyout funds, knowing they will never get to 100 cents on the dollar, knowing it is not going to work for everybody, knowing that everybody isn't going to be affected, but doing the best we can with what we have. And we believe the Volkmer legislation really gives us that kind of flexibility.

The other point I would make is that we need to move. As Harold tried to point out, these folks are now in limbo. They don't know whether to rebuild, they don't know whether to move. Some of them don't have the ability to move. Some are still living in pick-up trucks, they are living out on the land, and they need an answer.

What I beg the committee to do today is to help us, if you decide to do it, to bring out a piece of legislation so we can get it on the Floor and see if we can do something before we leave here this year, so that the hard work of cobbling together these local buyout programs can take place between now and, say, early next year, so

that at least there is the beginning of an answer for these people so they can begin to make some decisions.

As you can well understand, they are very anxious and anxiety filled about where they are and what they are going to do. We just need to try to move.

The last two points are that beyond this, I would hope your committee would work with other committees in looking at a coordinated, long-term strategy with regard to our flood programs.

First, flood insurance. The House Banking Committee is working to reform that program. I think that is greatly needed. I think we have got to have broader coverage, and we have got to increase the program's actuarial soundness. I think where property is being built near coastlines or near floodplains, we have got to ask if the program is properly funded in terms of premiums, and we have got to take a hard look at that program so that we avoid problems like this in the future.

Obviously, here we are talking about people who were in the floodplain who probably were there historically in some cases; in other cases, they should have been encouraged never to build there, and we need to review that long-term flood insurance program to try to improve on some of those problems.

We also need a comprehensive strategy on rebuilding the levee system and rebuilding the whole waterway. Congressman Durbin has introduced legislation that I have cosponsored, that many of us had providing for a long-term, comprehensive study of the Upper Mississippi River Basin. And I think it is just essential that we get some kind of a study on that as we look at rebuilding and working with the Corps of Engineers in rebuilding the levees and the floodplain.

I shared for a year an area with Congressman Emerson, Sainte Genevieve, where we tried to get some improvement in the program. We tried to get a levee built. Through heroic efforts, they warded off the flood in one of the historic communities in the country. But as we look to rebuilding now, we need to have a plan in place, and the Durbin bill I think gives us a chance of doing that. That is why I wanted to be here today.

I really, really appreciate the committee taking the time, interrupting your normal schedule to take up this very important legislation. I hope we can move something as rapidly as possible.

Thank you.

Mr. APPLEGATE. Thank you very much, Dick.

I, too, hope the committee can act expeditiously. We all understand what the problem is, and hopefully we will be able to get something accomplished. With the very close cooperation of the Chairman and the Ranking Member, I think we will be able to get something done.

Mr. GEPHARDT. Great.

Mr. APPLEGATE. Next we have another gentleman, Jim Nussle, who also represents an area which has been hard hit by the floods, and who is here in support of the request that has been put forth and represents his district very well.

Jim, welcome to the committee.

TESTIMONY OF HON. JIM NUSSLE, A REPRESENTATIVE IN CONGRESS FROM IOWA

Mr. NUSSLE. Thank you, Mr. Chairman.

Let me start by indicating to you that I have some prepared testimony that I would ask unanimous consent to be made part of the record, and I will just summarize.

I think all the good things have been said already about a real bad, serious situation. So I will just make some quick points, and allow the other witnesses to move on.

First of all, the Durbin legislation is necessary because the effect is regional. There have been States along the Mississippi, and mine included in Iowa, that have suggested they should do some State studies. Illinois has indicated they want to do a study. There are others that want to take a look at their own situations vis-a-vis the tributaries of the Mississippi or the Mississippi itself.

The problem with that approach is that it is good, but it does not recognize that this is a regional situation, and one that requires the Federal Government to step in and assist and coordinate that research and those studies so that we can have a comprehensive answer to the problems of flooding.

The length of the Mississippi, the length of the tributaries, just I think preclude a State from being able to do enough of a job to get this done. So I think that in and of itself, you know, really makes us responsible in this situation, and I think that the committee understands that.

Second of all, I would just point out that I don't think it is only mechanical. It is not just the levees. It is not just the locks and the dams. It is not just the dikes. It is not just all those systems and whether or not they are or are not in place. It is also how they are used and utilized. Let me give you an example.

I represent a small town in the Upper Mississippi called Marquette, and there is a gentleman in Marquette who came to one of my meetings that I held up there to discuss the situation, and he is probably one of those folks who would be a self-described river rat. Most people don't like that term, but I think he quite enjoyed being referred to as a river rat.

His grandparents brought him out on the river. He utilized the river for commerce and industry in his own small business, and now he is bringing his grandchildren out on the river. He understands the river very well.

In his opinion, and obviously he is not an engineer, somebody who would necessarily be an expert, someone we would call to Washington, D.C. for his testimony, necessarily in his opinion he believes there were some judgmental mistakes that were made possibly by the Corps of Engineers, possibly by communities along the tributaries, that made the situation this summer even worse: holding back water, earlier in the year, even before we knew it was going to be a serious situation, for commerce, for boating, for recreation.

He told me a story of a fishing hole he liked to go to that was flooded as far back, or he couldn't even find as far back as the beginning of March because of the fact they were holding back water. This is the first time in his recollection that this had ever happened.

Again, not to blame anybody, not to point fingers or suggest there were any mistakes but to suggest that the study should not just look at the mechanics but also how those mechanics operate and the flow of information and the judgments and assumptions that are put together in order to provide the management of flood control.

Finally, of course, is the whole idea of prevention. I would suggest to you that this next spring we may be back in touch with you because of the saturation level in all of these areas. I can tell you right now that we are hauling corn in Iowa that has 40 percent moisture to the elevators in my district. That is unheard of. But it also would suggest to you that there is a lot of moisture out there.

This was not just a matter of a couple of rains here and there in June and July that caused this. This was moisture and rain and drizzle from the beginning of this year and actually late last year that continues even today, if you watch the Weather Channel or hear the weather reports.

So as we look at this, I would just ask that you consider that this is regional; number two, that it is not just mechanical but also judgmental; and that it is in fact prevention, because we may be back as early as next year.

To continue the effort of helping the victims of this flood, number two, of course, to try to work and study on how we prevent the next flood. And I would respectfully disagree to those that would suggest this was biblical or a 500-year in proportion and we may never see this again. It is possible we could see this next year. And I think the committee realizes that, or it wouldn't be meeting to discuss this.

And finally, of course, to suggest that the Congress in and of itself has a responsibility to plan for the crisis of the future, because Mother Nature is stronger than any Congress, and God in his wisdom is stronger than any Congress, thank God, and he may decide this is appropriate for next year. If that is true, there isn't anything we can do about it. However, we can't plan for how to assist those victims in that situation.

There was no plan in my estimation for that contingency this year. We did not look soon enough at crop insurance, flood insurance, emergencies. We were not able to pay for the flood except by deficit spending. And there are ways we can add to that.

So the committee's role, I think, in looking at these two pieces of legislation, and particularly the study that Mr. Durbin has authored, that I am an original cosponsor of, I think is a responsible way to move, and I commend you for holding the hearings and giving us at least your tacit indications that this is possible even this year. I would thank you for that.

Mr. APPLEGATE. Thank you very much, Jim.

I think we are all very sympathetic to what you had to say. You articulated your position very well. Being an individual who has lived on the Ohio River all of my life, yes, we have always been considered as river rats. And it is not a derogatory term, it is just the way it was, until I discovered what rats were.

But nevertheless, we are also very pleased to have with us one of our favorite Members of Congress, and one of the so-called car-

dinals of the House. He, of course, represents an area of Illinois that has been hit hard also.

And it is always good to have you here with us, Dick Durbin.

TESTIMONY OF HON. RICHARD J. DURBIN, A REPRESENTATIVE IN CONGRESS FROM ILLINOIS

Mr. DURBIN. Thanks, Mr. Chairman.

I want to thank the committee for gathering today to discuss this important issue. I think that this opportunity today to testify on behalf of my proposed legislation and in support of the legislation of Mr. Volkmer is a timely undertaking, and I am certainly hopeful this committee can move forward on this issue before we close business this calendar year.

I am also happy to be joined today in having two witnesses from my area who will testify. Annie Hoagland will be here later to talk about her vision and her concerns about the area that is known as the Great River Road, which we have a great deal of pride in. Both Mr. Costello and I represent portions of that. And we are looking forward to her testimony.

I want to take just a moment here to point out another individual who is going to testify, give a tribute to him. Those of us in public office are dedicated to public service and we make great sacrifice for that. The individual testifying later, Gerald Windy Nairn, has really shown the kind of dedication which few of us are called to demonstrate during the course of our public career.

His town of Grafton, which is in my district, has been hard hit so many times by flooding, and yet through his leadership and with the indomitable spirit, they have risen to the challenge. They have proven they not only have endurance, they have a big heart, and they have worked to help one another.

What is really inspiring in this latest flood catastrophe in Grafton is how the people in that town and the leadership have come together to look to the future, to try to figure out how they can avoid this, and I think what Harold Volkmer said earlier about buyouts and relocation is critical to make sure we don't run into these tragedies again.

Windy Nairn has worked night and day to the point where he was hospitalized for a period of time with exhaustion. He came out of the hospital, back on the job, working again. You can't pay an elected official enough for what he has given to that community. And I am happy he is joining me today.

I also would like to salute the Governor of the State of Illinois, Jim Edgar, who has sent his representative, my friend, Al Grosboll to testify. This has been truly a bipartisan effort start to finish to deal with this flood, and it will continue to be. The Governor has done an extraordinarily good job working with Federal and local officials.

Tribute has been given to the National Guard, well deserved, tribute has been given to the Army Corps of Engineers, and I would join in those as well. You just can't start to count the literally hundreds of thousands of people who sacrificed their time to come forward and help with this. We don't have mountains in the Midwest, we don't have a seashore, but we have got a lot of good neighbors, and they came forward during this tragedy to help one

another on the sandbag lines and Red Cross tents, really making life livable for a lot of people who faced the greatest tragedy of their lives.

Congressman Borski—he has stepped out for a moment here—I think hit the nail on the head on why I introduced this legislation. We are really asking this committee to give us some leadership and help in developing a comprehensive approach to the Mississippi River Basin.

If you will allow me just a moment here, I think the history of this situation is worth repeating. General Arthur Williams, who is here with the Corps of Engineers, told me this story several months ago on our way to view the flood damage, and it really motivated me to introduce this legislation.

In 1927, we faced a serious flood on the Mississippi River. As a result of that flood, Congress came forward and made an important decision. As a result of that decision, you might wonder what impact it has had today. Well, let me tell you what it has been.

Mr. Emerson, my friend and colleague from Missouri, represents the Cape Girardeau area, I guess the southernmost point on the Mississippi River in Mississippi. If you look back on the news reports of this flood before 1993, it is interesting that most of the concern and most of the disaster occurred off Cape Girardeau, Missouri, and the people south of that, in the lower Mississippi River were hardly ever mentioned as being concerned about what the flood would do to them.

The reason, of course, is that the Mississippi River from the viewpoint of its natural state, is a much different river, south of Cape Girardeau, Missouri. It is wider, it is deeper, it has much greater flow. So all of the water that was causing all the damage in my district, Gephardt's, Pat Danner's, all the way through, by the time it reached Cape Girardeau, it flowed to the gulf without serious problem.

You might say God took care of the folks in that community, and it is true, but so did Congress, because in 1927 we decided we were going to treat this as two different rivers. It became the responsibility of the Federal Government to build the levees, to develop the land to make sure—we have invested $6 billion or more in the levee system south of Cape Girardeau, where the Ohio River empties into the Mississippi, and it has paid off, because the people living along that Lower Mississippi have not faced the kind of tragedy and disaster we faced with the flood in 1993.

The same is not true for the Upper Mississippi, north of Cape Girardeau. As a result, we have seen kind of a patchwork approach. Some levees are federally approved, some are not. Some are good, some aren't. Some are low, some are high. Some are inadequate, and some are very good.

As a result, when this flood hit, everything hit at the same time on the Upper Mississippi. And the tragedies that occurred in Mr. Costello's district, he can certainly tell you the story of Valmar, Illinois, which was virtually wiped out by this flood and forced now to consider moving, and in so many other communities, where the reason of course was that in 1927 this Congress made a decision.

What we are asking you to do now in this legislation I am introducing is to approve and authorize a continuation of the study of

the Mississippi River in the future. Let us learn from this tragedy of 1993. Let's not walk away from it, say it will never happen again in 500 years. As Mr. Nussle said, we hope it won't. But if it does, what can we learn?

I think there are several things. First, one of the most serious problems of this flood were interruptions in transportation. We are still waiting in Illinois to get our bridge open so these poor folks have a chance to get back in touch with families and businesses and their ordinary lives. The flood waters have prevented that and now we have got to work on that aspect.

In the future when we build a bridge or access road to a bridge in a floodplain, should we require levee protection? I think it is a valid concern.

Take a look at this flood, what it has done in the area of hazardous waste, industrial waste. Superfund sites have been devastated and inundated by this flood, and all of the concerns we had about pollution were being washed down the Mississippi/Illinois Rivers, and I don't know ultimately what impact that will have on communities and people living downstream. But when we talk about Superfund sites and hazardous waste, shouldn't there be levee protection while we start to deal with those in a long term and permanent way?

And, of course, the whole areas of health and safety, people literally cut off from hospitals, from the access they need to critical emergency care. These are all legitimate concerns.

My study, which has been coauthored by virtually every Congressman, Congresswoman in the affected area, asks the Corps of Engineers during the next calendar year to sit down and draw up a priority list. What should we protect on the Upper Mississippi? We can't afford to protect it all, but what are the highest priorities?

We now have included in the appropriations bill, the energy and water bill, money that was originally put in by Senator Bond of Missouri, more than $2 million to move it forward.

I want to thank Chairman Mineta for making sure that money moves forward.

What the corps is looking for in this legislation which we are bringing forward today is the specific authorization from this committee to start this study, to make sure the Upper Mississippi is prioritized so we can avoid future damage.

I want to conclude again by thanking the committee. I know you have got a busy schedule, we are nearing the end of the session. But I sincerely hope before we go home, we can consider this important legislation.

Thank you.

Mr. APPLEGATE. Thank you very much, Dick.

I have an idea that we will get something accomplished through this committee. And thank you for a very well articulated position. It was very good testimony.

At this time we have Pat Danner, who also represents a section of the country hit hard by the floods. I would also remind all that are here that Pat is a Member of the Public Works Committee, and it is always good to have her in front talking to us, or up here sitting with us.

TESTIMONY OF HON. PAT DANNER, A REPRESENTATIVE IN CONGRESS FROM MISSOURI

Ms. DANNER. Thank you, Mr. Chairman, Members of the committee.

I have learned the difference in being a Member of the committee and being someone who testifies. The difference is that if one is a Member of the committee, they have an opportunity to have a sip of water. If they testify, they do not. I mention that because certainly water is the mainstay of life, as we all know. Too little of it, we die. Too much of it and we die. And many people in my district did die earlier this year during the flood.

I, too, will ask that my remarks be submitted for the record and will make only a few comments. First of all, I would like to dispel some inaccuracies. There have been some people who remain unsympathetic because they feel these people were perhaps the proverbial river rats living on the edge of the river, and therefore should have expected what happened. But as the Majority Leader said and some of the other Members have said, when we flew over our district in helicopters and airplanes, over the district and throughout the district, it was like flying over the ocean with trees and rooftops peaking out.

People who lived many, many miles from the river were impacted by this, because of the groundwater and the runoff from the hill. So these aren't just people who live on the edge of the river, who in some people's opinion should have, quote, "known better." And therefore I am pleased to say that I am a cosponsor of both Congressman Volkmer's legislation as well as Congressman Durbin's legislation.

I would like to speak for just a moment about the fact that we really need to take a long and thorough look at the problem here, because we are not just talking about farmland and some people who want to take this opportunity to convert both farmlands to wetlands. We are talking about in my district industrialized areas that are protected by water referred to as private levees, as well as many businesses, and one community, 140 businesses were impacted by the flood.

We are looking at other far-reaching problems generated by the flood. And that is, as my businesses are out of business and as my farmlands are not productive, we really erode the tax base of my district that makes it possible for us to have roads, highways, bridges, schools and other political subdivision help.

One of the things I think is very important about Dick Durbin's legislation is the overall approach to the restoration of the levee program in my district. Approximately half of the water referred to as private levees, although as I say they protect—for example, in one of my communities, the water system and the sewer system are protected by water referred to as private levee—approximately half of my private levees are not going to have any assistance, it would appear, from the Corps of Engineers because they did not fill out—can you believe this?—they did not fill out the proper paperwork in 1986.

I find that absolutely incredible. We are looking at the restoration of levees in northwest Missouri based on the fact that they did or did not send in the appropriate paperwork in 1986. For those

people who purchased farmland and businesses after 1986, they had no idea that the proper paperwork hadn't been submitted.

I would submit to you that that is an illogical approach and it is going to create a patchwork approach where some levees are restored and other levees aren't restored, so that we have no continuity. That does not make logical sense.

One other comment, and I think that there is a very serious problem, that we may have another flood. Recently the Kansas City Star said of the four things necessary for us to have another flood, two already exist: a full river bank, saturated ground. Those two exist. The other two unknown quantities are the snowfall in the northern plains and rain next spring in our area. So we could be looking at even more devastation.

We are talking not only about the loss of livelihood, but as I said earlier, the loss of lives. My district not only had a great loss of life, but for some of you, you will remember that the greatest cemetery disaster in our nation's history is also in my district, where the flood waters took out a cemetery that was over 100 years old and coffins and vaults floated down the river and were literally lassoed from people in boats trying to recapture them.

In that cemetery now there is a hole the size of a football field that is 40 feet deep filled with farm equipment, vaults, coffins, and I could go on and on. That is true of my farmland, too. There are great, gaping holes. We have sand dunes as high as six to eight feet.

So we have many, many problems. And we really need as much assistance as is practicable and possible to send.

I would ask that we be as sympathetic to those who have had the curse of a flood placed upon them as we were to those people with Hurricane Andrew and the people who have experienced the tragedy of the earthquake.

I think there is no question we will have further disasters. I think the important thing is to get through this one that we are faced with now, and look very closely at how we are going to fund future disasters.

I would hope that those who have experienced the tragedy of the flood would not be held hostage.

Thank you, Mr. Chairman. Thank you, Members of the committee.

Mr. APPLEGATE. Thank you very much, Pat.

You had mentioned you would hope those who have felt the effects of the flood would have some sympathy. I can say living on the Ohio River, we have had many floods over the years. Here in 1990, in June or July, I forget which month it was, of 1990, we had a system that rose over a piedmont area, in the little area called Shadyside, and that pattern just stayed there, and it rained. It didn't last for six months or to such a degree in 30 days, but it did for an extensive period of hours, to the degree that eventually there was a 30-foot wall of water that came down that piedmont and took out the entire town, and went into the Ohio River, but it also took 28 lives with it.

So we didn't have it in total amounts of money, but we did in lives. So we felt the very emotional as well as economic disasters involved in that.

So I for one do have a great deal of sympathy, and I thank you for your testimony.

Ms. DANNER. Mr. Chairman, having been born in Lowell, Kentucky, we share of a love of, recognition of, and a fear of the Ohio River.

Mr. APPLEGATE. We want you to love it as well as fear it, too.

We also have with us today, the final congressional Member, a very talented young man, Jim Talent. Jim does represent the Second District of Missouri and is in pretty much the same boat, if I can use that, as many of the other Members that have sat in and given testimony today.

Jim, it is good to have you before the committee.

TESTIMONY OF HON. JAMES M. TALENT, A REPRESENTATIVE IN CONGRESS FROM MISSOURI

Mr. TALENT. Thank you, Mr. Chairman. I appreciate the opportunity to appear before the Committee to talk about the Great Flood of 93.

I want to join the other Members here in thanking you for holding this hearing in an expeditious fashion. It is vital that Congress consider these issues without delay. I would also like to ask permission to submit a statement for the record.

I am going to be brief since I am the last person here and just echo two points that have been made before, and maybe flesh out a little bit for the committee some of the details of the reason why we need to move quickly in my opinion.

First of all, I want to associate myself with Mr. Durbin's remarks. I think a comprehensive study of the Mississippi is essential from what I can tell, and I hope it results in a balanced approach to flood mitigation from every perspective. I look forward to working with him and the members of this Committee to see to it that we pass his legislation before the adjournment of the first session.

On the one hand, obviously we cannot protect every community with enormous levees. On the other hand, it is possible with a reasonable degree of levee protection, combined with other kinds of flood mitigation efforts, to ensure that people can continue using the flood plains as some have been doing for generations.

I want to talk about the floods' impact on small towns. I have a town in my district that was almost completely under water. It has been where it is now for 200 years. There are about 200 homes there and most of them were almost completely under water. With a reasonable, balanced, comprehensive approach, we can protect people so they can continue productive activities in farming and small towns and small businesses, while also being in a situation where we do not encourage people to live in areas where it is unsafe for them and inappropriate for the public as a whole.

The other point I wanted to make with regard to Mr. Volkmer's legislation is to reiterate what has been said before about the need for speed. The people in these areas really are caught in limbo. They have decisions to make. For example, their home may have been stickered in enforcement of what we all know as the 51 percent rule. They have to make a decision whether they fight that with the local building inspectors, whether they try and get that

sticker removed. If they can't, they have to decide whether they try and borrow money from the Small Business Administration to mitigate, to raise the home. They have very important decisions to make; what they decide will depend in large part on what Congress does. And obviously a consideration for them is whether they might be eligible for a buyout if they make those decisions. They don't want to go through all this effort to move back in and then in a position where they would be eligible for a buyout.

Also, it is important to recognize that local government units are in limbo waiting to find out what is going to happen with regard to buyouts. Obviously, local county governments are trying to decide what they are going to do.

One of my counties sees this whole problem, I think quite appropriately, as part of the larger problem of low-income housing. And they are trying to develop long-term plans to deal with that. They need to know what buyout options they are going to have.

Nobody has mentioned to this point, and I think it should be mentioned, that school districts need to know how many children they are going to have living in those districts. I have an excellent school district, Orchard Farms, in my district. When the flood hit, I was visiting shelters, and the question consistently asked—and it showed the spirit of these individuals—was, Well, will I be able to get my kids back in school in this school district in the fall? Here they were in Red Cross shelters and what they were worried about was could they get their kids back in the school district. They need to know what they can do.

And, of course, the Federal Government is continuing to provide rental assistance to individuals who are trying to decide what to do, whether to go back in their homes or whether they are going to be bought out and move somewhere else. Congress must act quickly so that these people can make these decisions.

So I associate myself with Mr. Volkmer's and Mr. Gephardt's remarks with regard to the need for speed. I appreciate the committee moving so quickly, and I appreciate the opportunity to testify.

Mr. APPLEGATE. Thanks again, Jim, for being before the committee and expressing your feelings on the problems, as your colleagues have done.

We on the committee are certainly armed with a lot of information, and I think some basically good legislation. All we have to do is know how to get it into law and make sure national money is in place and we can move forward, and we will try to do that as expeditiously as we can.

Mr. TALENT. Thank you.

Mr. APPLEGATE. I thank all of the Members.

I also have received prepared statements from Mr. Costello of Illinois, Mr. Blackwell of Pennsylvania, and Mr. Leach of Iowa. Without objection, these statements will appear in the record at this point.

[Statements referred to follow:]

JERRY F. COSTELLO
12TH DISTRICT, ILLINOIS

PLEASE RESPOND TO THE OFFICE CHECKED BELOW

COMMITTEES:
BUDGET
PUBLIC WORKS AND TRANSPORTATION
SCIENCE, SPACE, AND TECHNOLOGY
(ON LEAVE)

Congress of the United States

House of Representatives

Washington, DC 20515-1312

OPENING STATEMENT

HONORABLE JERRY F. COSTELLO

SUBCOMMITTEE ON WATER RESOURCES

PUBLIC WORKS AND TRANSPORTATION COMMITTEE

HEARING ON FLOOD CONTROL AND FLOOD PLAIN POLICY

OCTOBER 27, 1993

Mr. Chairman, I want to thank you for calling today's hearing so the Water Resources Subcommittee can examine our nation's flood plain policies in detail. I am particularly interested in discussing two legislative measures which have been introduced in response to this summer's severe flooding in the Midwest.

My colleague from Illinois, Congressman Dick Durbin, has introduced a bill, H.R. 2931, to initiate a Corps of Engineers study of flood control on the Upper Mississippi River. As an original cosponsor of this legislation, I believe the levee system must be thoroughly examined to determine whether adequate flood control is being provided to residents, farmers and businesses in the Midwest.

I am also a cosponsor of Congressman Harold Volkmer's bill, H.R. 3012. The most important aspect of this legislation raises the federal cost share for hazard mitigation from 50 to 75 percent to provide a realistic opportunity for federal financing of relocation projects. The current program offered under

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☐ 6787 State St.
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☐ 1330 Swanwick St.
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Section 1362, is available only to homeowners with flood insurance who have been significantly affected by flooding in the past. Many Illinois residents cannot meet these requirements but are very interested in relocating out of the flood plain.

My Congressional District in Illinois was severely affected by the flood. For example, seven of nine counties I represent were declared federal disaster areas this summer. I have toured all of these counties along the Mississippi River and was dismayed at the extent of the damage. Secretary of Agriculture Mike Espy and FEMA Director James Lee Witt have both personally visited the 12th Congressional District and seen the damage firsthand.

Many of these communities in Southern and Southwestern Illinois are continuing their battle against flood waters today. Hundreds of families are unable to return to their homes and farmers are unable to resume operation. Many of you may have heard about the town of Valmeyer in Monroe County, which has voted to relocate to higher ground from their location in the flood plain.

Each of these situations has created numerous problems. The 50 percent rule, which prohibits the repair of a structure if damage exceeds 50 percent of the value of the building, affects hundreds of family homes in Illinois. If repairs are not permitted, we must ensure that adequate federal buy out programs exist. Valmeyer's situation is particularly unique. Few communities nationwide have relocated as a whole. Is the federal government prepared to manage Valmeyer's relocation out of the

flood plain?

Farmers are also faced with significant questions. Many in the environmental community believe this year's flood was caused by the extensive levee system on the Upper Mississippi. They have recommended the levees be placed farther away from the riverbank to allow flooding to occur in the flood plain. Will farmers who operate in the flood plain be compensated for loss of use of this prime farmland if this recommendation is accepted?

Mr. Chairman, I want to welcome the witnesses who will testify before this subcommittee. Specifically, I look forward to hearing the testimony of Annie Hoagland from Godfrey, Illinois. I have worked with Annie on a number of projects in Madison County and know that she will add valuable insight to this debate.

In conclusion, I would like to remind everyone involved with today's hearing that the comments and concerns we address will dramatically impact the victims of the Flood of '93.

STATEMENT OF CONGRESSMAN LUCIEN E. BLACKWELL
BEFORE THE SUBCOMMITTEE ON AVIATION
PUBLIC WORKS AND TRANSPORTATION

H.R. 3087 -- GENERAL AVIATION REVITALIZATION ACT OF 1993

OCTOBER 27, 1993

Thank you, Chairman Oberstar. You have once again convened a timely hearing on a most crucial issue. As the Chairman and members of this committee know, there is no question that the general aviation manufacturing industry has been facing severe financial problems and record losses owing to massive increases in liability costs. As a result, the manufacture and sale of general aviation aircraft by United States companies have seriously declined.

Mr. Chairman, it is important to note that H.R. 3087 -- the General Aviation Revitalization Act of 1993 is a strong measure which seeks to respond to this dilemma. That is why I support it.

We are here today to discuss the effectiveness of H.R. 3087 in limiting excessive product liability costs. I know that we will hear today differing points of view concerning the much talked about issue of product liability reform and H.R. 3087's impact. We must, however, remember to take a careful and reasoned approach.

Furthermore, we must, in any event, consider most favorably any measure which emphasizes as paramount the creation and maintenance of jobs.
This legislation proposes to do just that. I have no doubt that we can make a fair determination which, ultimately, will help to ensure a stronger competitive airline industry.

Mr. Chairman, I would urge that, when the time comes, the committee report this legislation out. I welcome the witnesses who will appear before us today and await their testimony. Thank you again for allowing me to share my thoughts.

Statement by
Representative James A. Leach
Before the
Subcommittee on Water Resources and Environment

October 27, 1993

Mr. Chairman, I want first to thank you and your Subcommittee for holding this hearing to begin the process of evaluating our national flood control policy in the aftermath of the devastating floods on the upper Mississippi and its tributaries this past summer. I appreciate the opportunity to submit testimony for inclusion in the hearing record.

As a result of this summer's unprecedented rains, all of the counties in my Congressional District were declared federal disaster areas. Pictures of the flooded baseball stadium in my hometown, Davenport, Iowa, appeared in newspapers, magazines and on televisions across the country.

You undoubtedly have reports before you of the huge losses the flooding caused. While figures for Iowa are by no means final, some of the latest damage estimates include:

* $18.5 million for state highways, bridges, and railroad crossings;
* $12.5 million for city and county roads;
* $21.7 million for public water systems;
* $13.2 million for sewage treatment systems;
* $22.4 million for locks and dams, reservoirs and other facilities of the U.S. Army Corps of Engineers.

These figures, themselves incomplete, do not include the losses incurred by individuals whose homes were inundated, by businesses whose inventories were ruined, or by farmers whose yields were severely limited or who had no crop at all. To this must be added lost wages and business sales, and, when the emotional toll taken by the protracted battle with the high waters is taken into account, the true cost is incalculable.

By leaving its banks in such a prodigious manner, the Mississippi River system has forcefully reminded us of the central place it occupies, not simply geographically, but in virtually all areas of midwestern commerce. The river carries the produce of the region to the Gulf ports for export and it brings raw materials back to keep our factories running. The river is a recreational resource without equal and its health is essential to the environmental quality of the region. Obviously, the use -- and abuse -- of the river system needs careful reassessment.

You have before you two bills addressing the issue of the long-term implications of the flood of 1993. The first, H.R. 2931, has been introduced under the leadership of our colleague from Illinois, Congressman Durbin, would direct the Secretary of the Army to conduct a study to assess the adequacy of current flood control measures on the Upper Mississippi and its tributaries.

As you know, by way of history, the Mississippi below its confluence with the Missouri and Ohio Rivers, is confined within a massive system of levees built in the 1920s and 1930s. The upper river, on the other hand, saw the construction of a series of locks and dams to make the Mississippi navigable as far north as Minneapolis. A central issue after this summer is whether and to what extent the levee system should be extended north. If this should not prove feasible, then whether other mitigating flood control measures are needed on the Upper Mississippi must be determined.

A second measure before you is H.R. 3012, "the Comprehensive Cost Effective Relocation Act of 1993," which has been introduced under the leadership of our colleague from Missouri, Congressman Volkmer. H.R. 3012 would make assistance available under certain circumstances to state and local governments in relocating public and private buildings out of the flood plain inundated last summer.

Both these pieces of legislation represent important steps in the long-term response to the flooding of the past year. I am pleased to be a cosponor of each and recommend them for your Subcommittee's consideration.

The point I want to stress this morning is the imperative need for short-term action in preparation for next spring.

The consequence of Iowa having received twice the normal rainfall last summer is that its rivers and reservoirs are overflowing, its ground saturated and many areas still remain covered with standing water. Meterologists and hydrologists say this condition portends even worse flooding next year, with particular concern for next spring when river systems historically rise with the first major snow melt-off. Complementing current conditions is the projection that, because there is so much moisture in the environment, a high probability exists of having the worst spring rainfall in a 40-year period.

With the ground, rivers and streams already full, there will be no where for even a normal spring rainfall and snow melt to go. Further, those dikes and levees that survived this past summer's soaking have in some instances become porous structures and will be particularly vulnerable if high water reoccurs.

It is crucial that federal, state and local disaster control officials, in concert with the Corps of Engineers, begin making contingency plans for next spring. Vital facilities that were not knocked out by the flood last year, like the Davenport and Iowa City, Iowa, waterworks, which are at potential risk, need to be identified and if at all possible provided with new protection.

Reservoir levels need to be lowered to make room for runoff, levees need to be repaired and strengthened, and the possibility of deciding to divert water into certain areas to protect others needs to be examined.

If an ounce of prevention is worth a pound of cure, then the time to begin getting ready for the next flood, and the likelihood it will occur next spring, is now.

Finally, I would like to conclude by thanking the Administration -- and particularly the Federal Emergency Management Agency, the Department of Agriculture, the Small Business Administration, and the U.S. Army Corps of Engineers -- for their response to this summer's disaster. The effort these agencies -- and the thousands of men and women who work in them -- have made to provide assistance to the beleaguered citizens of the Midwest is much appreciated.

Again, Mr. Chairman, thank you for holding this hearing and for your Subcommittee's attention to the critical threat the heartland of this country faces next spring.

* * * * *

Mr. APPLEGATE. At this time we have Ed Dickey, Acting Assistant Secretary of the Army, Civil Works, accompanied by Lieutenant General Arthur Williams, Chief of Engineers, U.S. Army Corps of Engineers, James Lee Witt, Director of FEMA, and Galen Bridge, Acting Chief, U.S. Soil and Conservation Service, U.S. Department of Agriculture.

We have your statements, and if you would summarize, then there will be some questions from Members of the committee. With that information, we will proceed with Mr. Witt.

TESTIMONY OF DR. G. EDWARD DICKEY, ACTING ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS), ACCOMPANIED BY LT. GEN. ARTHUR E. WILLIAMS, CHIEF OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS; GALEN BRIDGE, ACTING CHIEF, SOIL CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE; AND JAMES LEE WITT, DIRECTOR, FEDERAL EMERGENCY MANAGEMENT AGENCY

Mr. WITT. Thank you, Mr. Chairman.

A few days ago I was over on the Island of Kauai looking at the devastation of the hurricane that hit that island. I was visiting with the mayor over some of the issues and concerns they had. It was raining, and I said, "Mayor, does it rain very often here?" And she said, "Yes, two or three times a day, and every time it rains here we consider it a blessing." And I said, "I think I have been blessed several times this year. So maybe some good will come from the rain after all."

Mr. Chairman, Members of the committee, I am pleased to appear before you today to present the Administration's comments on and support for the revised Comprehensive Cost Effective Relocation Act. I will also discuss the mitigation and floodplain management issues that we are confronting as we rebuild the flood ravaged Midwest.

The flooding that occurred in the Midwest was unprecedented in scope, magnitude and duration. The sheer numbers of victims, flooded homes and businesses, and damaged infrastructure demanded that emergency responders at the Federal, State and local levels work as partners to bring needed assistance to the affected region. And I am proud to say that this partnership performed very well.

During several visits to the Midwest, I was inspired by the determination and courage of the people of that region. Wherever we went, there was a spirit of community, of neighbors helping neighbors, united in a common cause to protect their homes and their livelihoods and their communities.

I remember joining a line of people filling sandbags to protect the historic town of Sainte Genevieve. People had been working 24 hours a day for 38 straight days trying to save this town. People had come from the community next door where they had already lost their town. There were volunteers from all over the United States. The outpouring of help was amazing.

The heroic efforts of the people of the Midwest provided inspiration to us all. But it also provided vivid evidence of the problems we face when we insist on challenging the forces of nature by our development and building practices.

Significant suffering and damages to home and business in the flood-risk areas can be avoided through sound floodplain management and mitigation programs. Yet, in many communities, this will not occur because of competing priorities for limited funds, and inconsistent Federal programs. These are the issues I want to discuss with you today.

What do I mean by mitigation? Mitigation includes those actions that will reduce or eliminate loss of life, injury, property damage from future natural disasters. For those responsible for making investments in mitigation—governors, mayors, county commissioners, and the Federal Government as well—the political support often isn't there. Or the short-term economic costs can't be justified.

We are in a unique situation right now. The political support is there, and the economic costs are justified. The opportunity is at hand to reduce significantly the number of people at risk from flooding in the United States. To do this the administration and Congress must lead the way.

As the impact of the flooding became evident, the administration, at the direction of President Clinton, immediately began a coordinated effort to plan for the long-term recovery of the Midwest. This interagency effort is addressing the complex economic and social issues resulting from the unprecedented flooding in the Midwest, issues such as restoring economic vitality, agricultural production and recovery, appropriate use of the floodplain and other environmental and health concerns.

Under the direction of the White House, the approach has been to take a broad look at Federal programs, cross agency lines and design innovative strategies to meet the needs of the citizens of the Midwest. This approach will allow us to apply limited resources in the most effective and efficient manner.

In doing so, we can be responsive to the problems facing the Midwest as they rebuild their communities. But also to look towards long-term economic, social and environmental goals.

A goal of this administration and of President Clinton is to help the people of the Midwest to rebuild their lives and to reduce the numbers of people and communities at risk from future flooding.

This will not be an easy task but the Administration is committed to it and we seek your support. I would like to share with you today some of the concerns that we are facing.

First, we have reexamined Federal funding programs to State and local governments after a disaster. More critically, how these funds can be used for hazard mitigation programs after a disaster. Programs such as community buyouts or elevation of flood damaged structures.

Each department and agency—including FEMA, Agriculture, Interior, COE, to name a few—have different programs to provide support to state and local governments. Each of these programs has different rules on who, how and what those programs can be used for. This situation creates confusion and often results in frustration on the part of local officials and disaster victims.

This serves to limit their usefulness in a combined and coordinated mitigation and recovery effort such as we have in the Midwest. While we did apply innovative approaches in the Midwest, such as using the Individual and Family Grant program to assist

in elevation of structures, this is a short-term solution. We need to establish a long-term, flexible system to support mitigation activities.

We need to provide support for nonstructural flood control and floodplain management programs so we can provide communities viable alternatives to rebuilding the levees.

As the Midwest demonstrates, it is time for the Federal Government to work with the State and local governments and the Congress to design a comprehensive program for community buyout and relocation in high-risk areas.

I will make development of such a program a priority for FEMA, so we will be better prepared to serve victims and communities after the next flood disaster.

In this same context, we need to take a broad look at our Federal policies on levee repair and reconstruction. The primary responsibility for levee work falls upon the Army Corps of Engineers and the Soil Conservation Service. However, FEMA does have a limited role.

As I noted earlier, as part of the Administration's interagency effort, we have implemented a coordinated policy which states that nonstructural alternatives to repairing levees should be offered to levee owners.

The policy also allows relevant agencies such as EPA and the Fish and Wildlife to play a role in the environmental review of levee restoration. This is working well in this disaster.

But from FEMA's perspective, we need to better define the policies for the post-flood environment. We need to consider alternatives for balancing community flood protection, such as levee restoration, with mitigation strategies such as buyouts and other environmental considerations.

These issues are actively under review by the Administration. This review will occur with extensive input from the States and close cooperation with Congress in setting future direction.

Another important issue that we face in the Midwest, which has nationwide implications, involves the availability of Federal funding for structural elevation and flood hazard areas.

When a community joins the National Flood Insurance Program, it agrees to enforce a floodplain management ordinance in exchange for the availability of Federal flood insurance throughout the community.

This ordinance requires that any structure that is substantially damaged after a flood must be elevated or flood proofed to at least 100 year flood level. This provision is critical to our efforts to reduce the numbers of buildings subject to flood damage. Unfortunately, the costs of elevation are not covered under flood insurance policies.

We would like to work with this committee and the Congress to resolve this problem. Our proposed solution would be to add a provision to our flood insurance policies that would provide coverage for the increased costs associated with complying with the elevation requirements.

Senate bill 1405, which includes authorization of this coverage, is currently under consideration in the Senate. We would like to see this provision in any National Flood Insurance Program legisla-

tion. We are also looking at changes to the Stafford Act to create enhanced capabilities to accomplish mitigation.

A significant step to help people in the Midwest mitigate their flood risk was taken by Representative Volkmer when he introduced H.R. 3012, the Comprehensive Cost Effective Relocation Act. This legislation improves the buyout program for the Midwest and future disasters.

One of the most effective mitigation tools we have is public acquisition of flood damaged property for permanent open space use, along with the relocation of affected individuals to sites outside of the flood hazard area.

The interest communities in the Midwest are showing in acquisition and relocation projects—in community buyouts—is just unbelievable. H.R. 3012 will help move people out of harm's way and reduce the cost to the American taxpayer from future flood disasters.

The Administration strongly supports the basic concepts embodied in H.R. 3012. We support increasing the Federal share of Section 404 grants to 75 percent. We support raising the cap on Section 406 funds available for hazard mitigation from 10 percent to 15 percent.

Both of these changes will provide increased support to State and local governments to take mitigation actions, not only for floods but for other natural hazards as well. For relatively minor expense now, we will save in disaster assistance costs and flood insurance payouts in the future.

We do have some suggestions on H.R. 3012 which we believe will enhance its positive impact on mitigation in this Nation. The administration recommends deletion of subsections A and C of Section 3, which are applicable only to the current flooding in the Midwest.

We also would propose that a third condition for acquisition and relocation be added. This condition would deny future Federal disaster assistance for facilities in areas acquired under the program.

Once again, I would like to compliment this committee and the Congress for their foresight in moving forward on this important legislation. We believe that this bill, with the minor changes we have discussed today, will help us take a giant step forward in mitigation across this Nation.

In closing, I want to share with you some thoughts on our future direction at FEMA. The time has come to face the fact that this Nation can no longer afford the high costs of natural disasters. We can no longer afford the economic costs to the American taxpayer, nor can we afford the social costs to our communities and individuals.

While we cannot control nature—we will always have floods, hurricanes, and earthquakes—we do know how to control the corresponding losses. We must and can work to design and build our communities better and to the extent possible, out of harm's way.

Mitigation must become a priority throughout all levels of our government. We must be proactive on mitigation and not reactive. We cannot afford to wait for the next hurricane or the next earthquake before we provide support for mitigation.

In our rebuilding of FEMA, I have established a mitigation directorate to work more effectively with State and local governments to implement mitigation programs. This is a first step. But we must do more.

It is my intent to look toward a comprehensive national mitigation program that reduces human suffering, that reduces economic disruption, and that reduces disaster assistance costs. We must look to applying mitigation measures on a proactive basis, independent of Presidentially declared disasters.

We must look at innovative ways to accomplish mitigation. Ideas like creating a natural hazards mitigation trust fund, establishing seismic safety enterprise zones, and partnerships with nonprofits and private sectors.

Each of us has the power to be a leader of change and I want to work with you to make mitigation a reality in this country. It is time for each of to us assume responsibility for the future safety of our communities and our people. I committed to do that when I became director of FEMA. And I ask you to join with me in this effort today.

Thank you, Mr. Chairman.

Mr. APPLEGATE. Thank you very much, Mr. Witt.

Dr. Dickey.

Dr. DICKEY. Thank you very much, Mr. Chairman.

I am pleased to be able to participate in the discussion of these important issues before the committee today. I am also pleased that General Williams, Chief of Engineers, is today with me as well. General Williams and I have worked very hard in ensuring that the Corps' short-term response has been the outstanding effort that indeed I think it has been, and we look forward to addressing the longer-term issues.

I want to briefly, in my oral remarks, go over a few principles which I think we NEED to keep in mind as we look toward longer-term studies and then provide specific comments on H.R. 2931.

First of all, I think we need to keep in mind that a new look at the river is needed not only because of the flood but because of rapidly changing social preferences for the use of the river and its floodplains and wetlands. It is these changes in preferences and economic considerations more than the flood which must guide long-term action, YET it is the flood which provides the necessary catalyst to reevaluate the Nation's floodplain management practices.

Second, flood damage reduction is an important aspect of floodplain management, but not the only objective. Restoration of wetlands and other alternatives to traditional flood control measures provide environmental benefits that have significant national values that extend beyond the protection that they provide.

Third, the economic value of the Upper Mississippi and Missouri Rivers, as it is currently used, is by no means trivial. These rivers and their tributaries and contiguous lands are important national assets, and they are currently being used by a wide variety of economic and environmental interests. When changes to this usage pattern are recommended, they will have potentially significant impact on existing users. The economic losses as well as the gains as-

sociated with changes in floodplain management must be carefully evaluated.

Fourth, the major flood of 1993 should not cause us to focus only on such rare events. We must also understand the consequences of changes in floodplain management when more frequent events of smaller magnitude occur.

Fifth, the Federal Government cannot and should not resolve these problems by itself. State and local governments and private sector interests must be fully engaged in the reevaluation of floodplain managements.

Sixth, any studies must recognize the limitation of resources, not only for private citizens, but for government at all levels. It may be necessary to ask those who choose to live and work in the floodplain to accept a greater share of the risk of their actions.

Seventh, two important goals of this reevaluation should be greater consistency among Federal agencies in their flood-related activities, before, during, and after a flood event, and also more flexibility within Federal programs in order to respond to flood events in ways that meet the test of common sense.

I think we need to keep these principles in mind, as I said, when we do any study, and it is with these principles in mind that I offer the following comments on H.R. 2931. As I indicated in my letter to Chairman Mineta of October 20th, I believe that the study may be too narrowly defined by identifying a limited set of objectives which focus primarily on structural flood control measures and may not necessarily reflect the full range of activities, interests, and opportunities that exist within the basin.

I am particularly concerned that the term "critical" or "high-priority public facilities" is undefined, and that the study could direct the Corps of Engineers to make recommendations that would infringe upon the responsibilities of other Federal and State agencies.

Although the completion date has been changed from 180 days contained in the virtually identical amendment to Senate bill S. 1298 to January 1, 1995, we still do not believe that the revised date would allow us to complete the kind of comprehensive study that would be fully responsive to congressional concerns as reflected in the study contents contained in section 2–B.

We would propose as an alternative that Congress authorize and fund reconnaissance studies of the reaches of the Upper Mississippi and Lower Missouri Rivers. This is described in the conference report accompanying the 1994 Energy and Water Development Appropriations bill.

The reconnaissance studies, which would take about 18 months to complete, would allow time for full public input, establish the base conditions needed for a full assessment of the economic and environmental cost and benefits associated with flood damage reduction projects, and changes in land use patterns. It would also allow to us enumerate the resources necessary to develop comprehensive solutions for improved long-term floodplain management and identify potentially productive feasibility studies for specific projects or programs that could improve flood protection capabilities.

Congressional support for this approach would be most clearly articulated if in addition to the funding contained in the fiscal year

1994 Energy and Water Development Appropriations bill, separate action were taken which would give the Army specific authorization and direction to carry out these studies.

We also believe it is important that any comprehensive review of floodplain management issues be undertaken as a broad interagency effort. While the Army is clearly deeply involved in these issues, other Federal agencies have equally important roles. Therefore, we recommend that the committee recognize that the Army's review would be part of a larger interagency effort directed by and for the President.

I recognize that today's hearing has focused on post-flood recovery and long-term policies of floodplain management. Nevertheless, in closing, I would like to take the opportunity to recognize the heroic efforts of local communities and citizens, the States, National Guard units, and all the Federal agencies that participated in the flood-fighting activities this summer.

The Army Corps of Engineers was an integral part of this effort and I am proud to be associated with the dedicated people, both military and civilian, of the Corps of Engineers.

Mr. Chairman, this concludes my statement. General Williams and I would be happy to answer your questions at the appropriate time.

Mr. APPLEGATE. Thank you.

Mr. Bridge.

Mr. BRIDGE. Thank you, Mr. Chairman. I appreciate the opportunity to visit with you this morning.

My statement does include a number of things we are doing on flood recovery work, including the use of the emergency wetland reserve program as an alternative to levee reconstruction where appropriate and where we have willing participants to do that.

The department has a long history in the flood prevention activities and flood recovery actions. Our focus in the past, and obviously will be in the future, has been principally on the small watershed or upstream watersheds. I am proud to report to you that the small watershed program did function well during the great flood and did save or avoid millions of dollars of damage in some of these upstream areas.

We are proud of that work, but in spite of that, and all the good things that we and the Corps of Engineers have done over time, continuing studies show that flood damages continue to rise every year in spite of our good work. Basically, this is because of the natural floodplains being encroached on and restricted, and people continue to live and work on floodplains, for many reasons, I would suggest to you, including various financial and other incentives that we may even provide.

While Federal agencies have been authorized to assist communities in evaluating flood hazards and in developing alternative methods of reducing damages, such as floodplain zoning, building homes, subdivision regulations, flood proofing, and warning systems, these methods are often not selected because the financial provisions from the Federal participants, the Federal side of the house, favor control measures such as dams and levees.

This is true of Public Law 566, the Small Watershed Program, where 100 percent of the money for flood prevention is provided by

the Federal Government whereas flood warning or other solutions are not cost shared at all.

Other opportunities for individuals to use floodplains for recreation, agricultural or wildlife uses are often neglected. When given the option, communities will choose the alternative that costs them the least. Alternatives to structural measures are rarely selected.

We must recognize, however, that for most of this century, the national priority of economic growth was the driving force to justify the full development of our water resources, as long as direct economic benefits could be shown to exceed the economic costs.

In more recent years, objectives have significantly broadened, and social and environmental values such as wetland preservation and restoration, and the quality of air, water and land have been recognized as important, as well as having economic value. Federal programs need to give those values more weight.

In addition, while recognizing that land use decisions are appropriately a local responsibility, people should be discouraged from locating on floodplains. To reduce flood loss, Federal, State and local incentives should be provided to adopt alternatives other than structural measures. For example, the benefits from future growth and development should not be considered as a benefit when evaluating future project action.

From the Congress we have seen increasing recognition of the values of alternatives to floodplains and the value of preserving open floodplain space. In 1990, Public Law 566 was amended to allow the Secretary to provide cost-sharing assistance to project sponsors to enable them to require perpetual wetland or floodplain conservation easements and to restore and enhance the natural capability of wetlands and floodplains. In other words, to retain excessive flood waters, improve water quality and quantity, and to provide habitat for fish and wildlife.

The local cost share for this option may be up to 50 percent. However, let me quickly point out to you that the cost sharing on flood prevention through structural measures is still 100 percent. We tried to get that wording changed to allow to us pay "up to" 100 percent, but we are still restricted to paying the full amount.

With respect to floodplain policy, we believe that the importance and value of natural and ecological functions associated with floodplains are becoming widely recognized. During the 1980s, many Federal agencies working together prepared a unified national program for floodplain management.

More recently, the Federal Interagency Floodplain Task Force prepared an update entitled "Floodplain Management in the United States: An Assessment Report," dated 1992. We believe that this document and its recommendations should be the starting point for revisions and evaluations of Federal programs that respond to flood control and floodplain policy in general.

We would agree that restoring and preserving the national and cultural resources of floodplains is a high-priority issue of this Nation. The report suggests that strong Federal support for programs to set aside floodplains from development is needed and that Federal policies and procedures should not discourage or obstruct innovative approaches to preserving our natural floodplains.

As I mentioned earlier, we are trying to do that within the small watershed program. We believe that with clearly defined Federal policy, we can understand and use the landscape functions that must be considered in a broader fashion than we have in the past.

The lessons of the disastrous Midwest floods should not have to be relearned by succeeding generations. Certainly the Department of Agriculture stands ready to work with this subcommittee on those issues, and I appreciate the opportunity to make these remarks today.

Thank you.

Mr. APPLEGATE. Thank you very much, Mr. Bridge.

In asking some of the questions, we are going to ask that the questions cut to the point and the answers be as brief, without long, meandering answers, so that we can get down to hearing everybody, and hopefully be able to get out of here at a reasonable time and come up with the necessary information we have, what we need.

Let me ask you this. Mr. Witt, first of all, something I was interested in, do you have an estimate of the cost of the buyouts for those towns that have come forward that are interested in that proposition?

Mr. WITT. We have an estimate, Mr. Chairman, of what it would take to buy out and relocate the communities that are interested, which is 207 communities at this present time. It is about $400 million. That is estimating 10,000 structures at about $40,000 average.

Mr. APPLEGATE. The question comes, would that include all the infrastructure, or are you just talking about buildings in itself?

Mr. WITT. That includes the individual homes, also businesses.

Mr. APPLEGATE. So that would include infrastructure.

Mr. WITT. No.

Mr. APPLEGATE. That would be the total, somewhere in that area.

Let me ask you this. Are you at this time thinking about modifying the Stafford Act in any way?

Mr. WITT. We are looking at several different things that we can change in the Stafford Act which would help the disaster response recovery program, and also support State and local governments.

In particular, one thing we are looking at is the cost share of disasters. Also, on December 6th we are having a critique of the Midwest flood, at which we will be looking at the response and recovery phase of the flood with the State and locals and our Federal counterparts. From that critique we are expecting to come forth with suggestions for change in the Stafford Act.

Mr. APPLEGATE. Mr. Witt, what are the major issues you are dealing with as you work with the communities to relocate out of the floodplain?

Mr. WITT. I think the biggest problem we have right now, Mr. Chairman, is in the buyout, relocation and elevation of structures.

One thing that is of tremendous concern to us is the amount of dollars that we have in the hazard mitigation fund. At the present time, it is about $39 million. Our concern is that is not enough money to do what we need to do to get people out of harm's way. That is our biggest concern at this time.

Mr. APPLEGATE. How are you or your organization going to promote mitigation?

Mr. WITT. Under the reorganization of the agency, I have established a mitigation directorate by itself, which has never been done. It is essential that we work with Congress and the State and local governments in pushing mitigation out to the front. The more we do in mitigation, the more tax dollars we are going to save at the Federal, State and local level, and the more lives we are going to save. It is just good for this country to have a good, strong mitigation program.

Mr. APPLEGATE. I thank you for that information.

Lieutenant General Williams, in the St. Louis Post–Dispatch, there was an engineer at the University of Illinois, Bruce Hannon, who told the Dispatch, and I quote. It says here, "The levees and the loss of wetlands clearly led to worse flooding. The Corps says its reservoirs offset the levee effect. That is baloney."

Would you like to comment on Mr. Hannon's comments?

General WILLIAMS. Yes, sir. I am familiar with that article you referred to. There has been no study at this point in time which would substantiate the statement that you just referred to.

We do have information with regards to previous floods. We have addressed the question with regards to whether or not levees and flood walls do increase the elevation of water in those areas, the backwater.

If you take that in consideration without taking into consideration all the other structures that work in conjunction with levee and floodwall systems, I don't think that holds up.

The fact of the matter remains, in this particular 1993 flood, even if you bought the premise that the gentleman referred to, the height or the increase in the water level we are talking about is tenths of a foot. This particular flood, we are talking 20 and 30 feet of water. So it is an issue that we need obviously to look at. We do such a review after each event and we take these reviews very seriously.

Mr. APPLEGATE. So scientists have urged moving the levees further back from the river to allow the natural floodplain to recover the flood waters. Has the Corps approved any such construction, and can you give me any idea what the problems are or would be with such an approach?

General WILLIAMS. We are looking at various alternatives for structural solutions to the flood control problem. That particular alternative is one that you would look at, as to how far back you would put the levee and whether or not it would be the primary levee versus the secondary levee.

The situations we have now, where you already have things on the ground, so to speak, and whether or not you should go back and reconstruct existing levees to their current alignment versus putting them in a different alignment, perhaps farther back, is one that we would look at.

In many of the cases, as described here this morning by previous people who have testified, you don't have the opportunity to do that because of development that is in the area. It is an area that, as Dr. Dickey referred to in his testimony, you need to take into con-

sideration all of those different alternatives and the impacts they would have on the area.

Mr. APPLEGATE. Thank you very much, General.

Mr. Boehlert.

Mr. BOEHLERT. Dr. Dickey, am I correct in my information that of the 229 Federal levees, only two were breached?

Dr. DICKEY. I believe that is the right number. Were breached, yes, that is correct.

Mr. BOEHLERT. And the other type of levee constructed by non-Federal agencies, there are 268 of those. Supposedly they met corps' requirements for assistance. And I am told that 164 of those were breached or overtopped.

First of all, I am not asking you to commit to the exact number, but does that sound about right?

Dr. DICKEY. Yes.

Mr. BOEHLERT. They are built to corps' requirements?

Mr. DICKEY. No. Let me address that question.

Mr. BOEHLERT. I want to feel this out. It is something you do very well, which you are supposed to be doing, and if we get everybody else to meet to your standards, maybe we wouldn't have——

Dr. DICKEY. They are not built to the same standard as a Federal levee. A Federal levee is built to very high standards, as evidenced by the fact that only two of the Federal levees were breached. The standards referred to with regard to the non-Federal levees are the standards which the Corps of Engineers has established to be eligible under Public Law 84–99.

Mr. BOEHLERT. What kind of assistance?

Dr. DICKEY. This is the reconstruction assistance where the Federal Government will pay 80 percent of the cost of restoring a levee that was damaged by the flood if indeed you are eligible under the program and are economically justified to do so.

Mr. BOEHLERT. Should we reevaluate that? If we have got such a high rate of failure, to do what we want them to do, why should we provide assistance for reconstruction? Shouldn't we have more demanding requirements?

Dr. DICKEY. That is a very good question, and although most of the thrust is in terms of lessening the standard rather than raising it, the fact is we have to recognize that this was an extraordinary event.

With the number of non-levees, whoever constructed them, it is not surprising that a large number of them failed, and to suggest that in fact they should have been constructed to a higher standard is a very complicated question. It may not make economic sense to do so.

These levees were, again, privately constructed. Private judgments were made. They have some minimal engineering standard, to be sure, although not the same, of course, as a Corps levee. They were cheap to build, if you will, and they are cheap to repair, I might add.

Mr. BOEHLERT. The third category is the one that doesn't meet—non-Federal levees, 80 percent of those failed.

Dr. DICKEY. There are many, many, yes, indeed.

Mr. BOEHLERT. But the second level, educate me, I am an Easterner, I don't know much about it. I have never seen a levee. But

it just concerns me that if they are eligible for Federal assistance and they have such a high failure rate—I recognize the great flood of 1993 was the 500-year flood.

Dr. DICKEY. In some cases it was, and in other cases it was a lesser event. Recognize that these levees are built for 25-year or 50-year levels of protection, at most for an agricultural levee. So it is not surprising that they overtopped or failed when you get a 100-year event.

Mr. BOEHLERT. Am I off base in suggesting we should require a higher standard——

Dr. DICKEY. You raise good points. I am just saying it is a much more complicated question than just the fact that all these levees failed. There may be something wrong with the criteria.

Mr. BOEHLERT. General, do you want to comment on that?

General WILLIAMS. Yes, sir. There has been much play in the press and media in regard to levees failing, and a lot of discussion about levees.

We need to keep in mind, the levees that we are talking about, and there are really three basic categories to simplify the discussion here. There were levees that were designed and constructed by the Federal Government, Corps of Engineers, that are now turned over to locals, and they are operated and maintained by the locals. Those levees are eligible for 100 percent Federal assistance to be repaired.

Mr. BOEHLERT. They held up very well.

General WILLIAMS. Yes. There are about 230 of this type of levee in the area, and there were two of them that were breached. And I would like to come back to that in a moment.

There is another set or category of levees. These are levees that were built by private interests, that participated in the program, Public Law 84–99 assistance program. They have met the standards, the criteria that we have established, and those levees that were damaged will be eligible for assistance on a cost-sharing basis of 80/20.

Mr. BOEHLERT. Did they get some Federal funds to help in the construction?

General WILLIAMS. They may not have had construction funds in the beginning. However, over time, if they have had damage done to those levees and they have maintained them properly according to our standards, they would have been eligible for Federal assistance.

There is a third category of levees that are private levees that are not eligible for assistance under Public Law 84–99. We don't know how many of them there are. There are at least 1,100 of them that we know about, and there are obviously many more.

Part of the problem that we have is, one, understanding the type of levee we are talking about, and then, number two, loosely throwing around the terms of failure, breaching, overtopping and so forth.

Many of the levees that are eligible for Public Law 84–99 consistently stood up to the test of time with regard to what they were designed for. They were designed for a much lower frequency flood. The water got much deeper, and eventually the water went over the top. They generally weren't breached, though some of them

were, but many them were just overtopped, and then they eroded on the backside, and you had a gap.

So we need to keep in mind there is overtopping that occurs. So they stood up to the test for which they were designed.

Now, many of the levees that are private levees that are eligible for Federal assistance are agricultural levees, and the minimum design standard is for a five-year frequency flood. There are some private levees that are in the program that are eligible for assistance that are in urban areas, and the minimum protection for urban areas is a 10-year frequency flood.

The flood that we experienced was much higher than that, obviously, and you would expect that they would eventually be overtopped at some point in time.

Mr. BOEHLERT. I guess what I am asking then is, are you satisfied with the present requirements or standards for levees eligible for Federal assistance, or should we revisit the standards and perhaps make them a little more stringent?

General WILLIAMS. That is part of the task we are going through right now, going back and revisiting our whole policy. That is part of what will come out in the review process and whatever studies are undertaken.

Mr. BOEHLERT. Thank you.

Director Witt, I want to thank you for your—I am one of your fans, incidentally. Your agency has not had the best track record in town, but under your leadership—and I am a Republican—I like the direction in which you are moving.

I also like your candor. On page 2 of your testimony you talk about the State and local governments being confused and not quite knowing where to go for direction because all the various Federal agencies are not quite sure what they are eligible for, from which agency.

Does your agency have the responsibility for coordinating all that?

Mr. WITT. Yes, sir, we do.

Mr. BOEHLERT. If I talked to my officials at the State and local level, do you feel some degree of confidence that they will say that some of the confusion has now been eliminated because they have got a one-shop service center?

All I think about is some person in Alexandria, Missouri, every single house is just not habitable anymore, and the business area is devastated, and these people are looking for some help, and they look to the Federal Government. They don't want a listing of health, medical agencies, this agency does this, this agency does that; they just want to go one place and say "help." Are you the place where they go and say "help"?

Mr. WITT. Yes, sir, we are.

Mr. BOEHLERT. Do you feel confident—this is a softball—that you are doing well at sort of coordinating everything so that the people don't have to be told, "Well, you are not in the right office, now you have got to go three blocks downtown to the next community"?

Mr. WITT. I think we are pulling together all the programs that we can pull together from all of the other Federal agencies, with SBA, HUD, Department of Agriculture, every program that has dollars that could be utilized in buyout, relocation or evaluation, we

are pulling that together and meeting with the communities, telling them what funds are available, what funds they can use for buyout relocation, such as the CBDG money from HUD, and working very hard with each of the communities.

At the present time we are working with 53 communities, and meeting with the other communities as well. So we are pulling it together. It will be a one-team effort.

Mr. BOEHLERT. I guess I will ask the mayors, county officials that same question. I hope I get the same essential answer.

Mr. WITT. I do, too.

Mr. BOEHLERT. When we deal with a buyout program, we go in with a buyout program, and am I correct in understanding that the present is 50/50, that is the share, and the legislation being advanced by Mr. Volkmer would go 75/25?

Mr. WITT. Yes, sir, that is correct.

Mr. BOEHLERT. And the Administration is supporting that legislation?

Mr. WITT. Yes, sir.

Mr. BOEHLERT. It sounds reasonable to me, too. When we go to a buyout program, when you buy out the property in question, what happens to that property?

Mr. WITT. That piece of property reverts back to that community or county, and they can utilize that property as a land management type property. They can build a ball park or trails, but it has got to be left open.

Mr. BOEHLERT. Never more a residence?

Mr. WITT. Never more, no, sir.

Mr. BOEHLERT. Is that in concrete?

Mr. WITT. Yes, sir. And also we asked the section to be changed so disaster assistance would not be provided for anything that was on that piece of property in the future.

Mr. BOEHLERT. What happens in a buyout if you go to an area and there is an area that is likely severely damaged and you recognize certainly we should initiate a buyout program, let's say there are 20 properties, and 13 participated, and three said, "No, we are going to stick to it we are lifelong river rats," what are you going to do there? Are there condemnation proceedings that could start?

Mr. WITT. A county could work on condemnation proceedings. If not, we could work with them to try to get those 17 out of there, because that would be 17 less that we would have to provide disaster assistance dollars for in the future and get them out of harm's way.

Mr. BOEHLERT. As an Easterner who doesn't experience this problem, in beautiful upstate New York we fortunately don't have that type of problem, I am as compassionate as can be, my heart is ready to burst as I hear these stories about devastation, and I want to help these people. I don't want the people going back and rebuilding in the same place so the next time something like this recurs, I am going to have the same story. I have only got so many tears I can shed, and they are genuine, and I am really sympathetic. I want to assist the buyout program, but I want to make darn sure it is a one-time buyout program, and we are not in for a cycle. Does that make sense?

Mr. WITT. Yes, sir, it does.

Mr. BOEHLERT. This will be the last question, Mr. Chairman, because a lot of other people have questions. But the natural hazards mitigation trust fund, the $39 million you have, that is petty cash.

Mr. WITT. Yes.

Mr. BOEHLERT. So tell me about the trust fund. How would it be funded?

Mr. WITT. We are just now starting to develop something for that to present to the Administration, and hopefully also to you. What we need to do is to establish a mitigation program where we could work with the State and locals' own priority projects year-round, not just when a Presidential disaster was declared.

At the present time the only time we have the funds available to do mitigation projects is during a Presidential disaster. But if we can have funds available to work on priority projects with the States and locals that would get people out of harm's way, it would save Federal disaster dollars, it would save State and local disaster dollars, and it would save an awful lot of grief and suffering for those individuals, and also it would save Federal insurance claim payments as well.

Mr. BOEHLERT. Any thinking on the source of those funds?

Mr. WITT. Not yet, sir.

Mr. BOEHLERT. Shed some light on it when you get around to that.

I just want to compliment you for your fine testimony. It is excellent testimony. I wanted to compliment everybody in the room today.

This is a very serious subject. I might point out it conflicts with another grand opening with all the glitz and glitter on the Hill today, a long-running drama featuring Bill and Hillary Clinton just opened in Statuary Hall, and we are here dealing on this subject.

Mr. EMERSON. Will the gentleman yield?

Western upstate New York is indeed drained by the Mississippi River. Ultimately, it goes down past Mr. Applegate and comes into all those tributaries, the Ohio, the Ohio to the Mississippi. I mean, the system is vast.

You said you had never seen a levee. I want to invite you to Missouri as soon as you can come. I think we had the previous panel here comprised mostly of Missourians and my neighbors from Illinois, I see my friend Mr. Costello down there, is my neighbor across the river. We would love to have you come see our system of levees, both north and south. It is a different river in the north to the south. Up north the river is shallow. Down south it is wide and deep. You have got different factors affecting it.

As a matter of fact, Mr. Chairman, I would like to extend a personal invitation to you, the Ranking Member, in fact the whole subcommittee. Mr. Costello and I and all of our colleagues at the table this morning would welcome you. And I think it would be very, very instructive if you could come and see firsthand.

It is almost impossible to describe what we are talking about. And really, if you haven't seen it, you need to come out and take a look. We would love to have you do that.

Mr. BOEHLERT. Let me say to my colleague, I agree 100 percent. This hearing probably should be out there rather than here. Because of my schedule, I was not able to get there, but Mr. Moor-

head and staff has been out there and we organized some relief efforts in our district to help.

Mr. EMERSON. I appreciate that.

Mr. BOEHLERT. I am very sympathetic and I want to work cooperatively with you and Mr. Volkmer and Mr. Durbin, because this is an American tragedy of monumental proportions. But my interest, obviously, is in addressing the problem now, and trying to initiate that action which will prevent something like this from repeating itself in the future. We all pray on that one.

Thank you.

Mr. APPLEGATE. Chair Mineta.

The CHAIR. Thank you, Mr. Chairman.

Let me just comment on this idea of going out. One of the things we were thinking about doing was going, but at the time, I made the judgment that these fine folks had bigger and better things to be doing than to be shepherding us around looking at the damage. And I made the judgment at that time that we would not go out, and let them do their work.

Mr. Borski, as Chair of the Investigations and Oversight Subcommittee, was thinking of convening a hearing in St. Louis. That one we are still looking at, looking at working with the Corps of Engineers and FEMA on that, and we may still proceed on that one.

But given the nature of the damage and the urgency of the work that had to be done, in the spring of this year I just made the judgment that we would not impose on the poor folks. But you are absolutely right, we will get out there at some point.

Mr. EMERSON. Will the gentleman yield?

I appreciate your considerations. You are absolutely correct in them. But now things are starting to straighten out a little bit. It would be good to have representation from this committee out there.

I would suggest, if I may, that we not limit the undertaking just to St. Louis. Ms. Danner testified there were some very unique problems in the Missouri River. We have got—I would like for you to see where the river changes from a narrow, shallow river to a wide and a deep river.

All these things are very instructive. I am particularly interested in the standpoint of the magnitude of it; the fact that we do drain 28 States and two Canadian provinces and 41 percent of the Continental United States. It is very difficult to get your arms around a problem of that magnitude.

So, you know, I would encourage that there should be some other aspects to just looking at the situation in St. Louis. I heartily encourage that, and you would be in the environs there where you could see a whole lot of different examples of a lot of different things that would be very instructive, as we will be dealing with these situations for a long time to come.

Thank you.

The CHAIR. Thank you.

Before we get to the specifics of the 1993 flood, as a general matter—maybe I can direct this to you, Dr. Dickey—as a general manner, isn't it true that some levees, because they diminish a river's ability to store and convey flood waters, because they increase the

flood's height, pressure and velocity, can actually increase the risks of flooding?

Dr. DICKEY. In some mathematical or physical sense, indeed, if you constrict the floodplain, you raise the level of water upstream, increase velocities as you pass through that area, indeed that is true. That is a physical phenomenon. That is why you have to look at these things on a physical basis and take into account the storage that may be upstream in terms of understanding what the effect on the system is.

But in a technical sense, if you constrict the river at a point, you will of course inhibit the flow of that river and raise the stages upstream at that particular point where you have the constriction.

The CHAIR. Mr. Bridge, given your testimony, I would appreciate your testimony on this as well, because in your testimony you state that "studies continue to show that flood damages rise year after year. Basically this is because the natural flooding has been restricted."

And I am wondering if you can give us further comment on that question.

Mr. BRIDGE. I think, as Dr. Dickey has indicated, it is very difficult to generalize on those kinds of issues. I was sitting here listening to the dialogue on how high we ought to build levees and to what standard we ought to build them. But again, you have to look on a system basis.

One of the better things we might do on these main stems is to put in some agricultural dikes that we recognize are going to fail at certain river levels or certain frequencies of storms, in such a way that they do give relief to the main stem.

So the argument over standards is not one over what is right or what is wrong, but rather what is right in a system sense. So I think we have to go back to that. It is a fact that flood damages across this country continue to grow, regardless of all the good work we do, and it is our inability to get local governments and so on to control floodplains and keep people out of them.

The CHAIR. Are we in a situation where the Corps will not help pay for the rebuilding of nonparticipating, non-Federal levees, but the Soil Conservation Service will, or FEMA and SBA will, at least through loans?

So in the bottom line, are we being inconsistent, or are we being inconsistent in terms of our approach to Federal assistance for the rebuilding of nonparticipating, non-Federal levees?

Dr. DICKEY. I could address that, perhaps from our perspective. The levees, first of all, I don't think we are being inconsistent. I think the hallmark of the policy that we have here is a coordinated, interagency effort. And the idea is that if you are on the main stem of the major rivers here, and are, shall we say, in the Corps' zone of influence, you are either eligible or not eligible for reconstruction. If you are within those reaches of the river, it is the Corps that makes the decision, and if the Corps says no, then neither Agriculture nor FEMA would in fact say yes.

So there is one Federal answer here. And that has been a very carefully coordinated policy.

Now, it is true that in areas of influence of the Department of Agriculture, they don't have the same formal program that the

Corps does, but we are talking about different reaches of the river and indeed inherently different kinds of levees, for the most part.

The CHAIR. Of all the levees on the Upper Mississippi and Lower Missouri, isn't it true that the overwhelming majority of them are non-Federal, and that the Corps never determined whether these levees would increase the flood threat to others?

Dr. DICKEY. That is in fact correct.

The CHAIR. Should Federal funds then be spent to rebuild any levee if the determination has not been made as to whether that levee increases or decreases the flood threat?

Dr. DICKEY. I think if you look at individual levees, it is probably and certainly analytically very difficult to demonstrate their impact. I think what is appropriate is a kind of a systems review of the whole river. But it is, I suspect, except in very large levee segments, impossible to analytically determine the impact of an individual levee on flood heights.

The CHAIR. In terms of Congressman Durbin's legislation, I believe the Corps has commented that it is too narrow in scope, or you mentioned that in your testimony.

Dr. DICKEY. Yes.

The CHAIR. Have you suggested or forwarded some language to us yet as to how H.R. 31 might be improved in order to——

Dr. DICKEY. I don't believe we have given you language. We would be happy to do that.

The CHAIR. It would be helpful.

Dr. DICKEY. Indeed.

[The following was received from Dr. Dickey:]

CECW-PL 16 November 1993

Hearing on 27 October 1993 before
House Committee on Public Works and Transportation
Subcommittee on Water Resources and Environment
on
1993 Midwest Floods, Flood Control and Floodplain Policy

Inserts for Record

A BILL

To provide for a comprehensive review and assessment of the adequacy of current flood control measures on the Upper Mississippi and Lower Missouri Rivers and their tributaries and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. PURPOSES.

The purposes of this Act are -

(1) to improve the flood protection on the Upper Mississippi and Lower Missouri Rivers and their tributaries in order to protect public health and safety, maintain commerce, and reduce economic losses due to flooding;

(2) to assess the adequacy of current flood control measures, both Federal and non-Federal, on the Upper Mississippi and Lower Missouri Rivers and their tributaries and recommend improvements in flood damage reduction and protection of environmental values;

(3) to examine the Federal and non-Federal role in funding the construction and maintenance of flood control measures on the Mississippi River and its tributaries and recommend changes to reduce damages to high priority facilities;

(4) to review the performance of local, State and Federal control measures over the long term to determine whether such measures provide a reasonable approximation of optimal uses of the river and adjacent floodplains and maximize the economic and environmental benefits to the Nation;

(5) to define the need for future development of analytical models and riverine data to allow project sponsors and regional, State and Federal interests to accurately determine the hydrologic effects of planned flood damage reduction measures on the larger riverine ecosystem; and,

(6) to identify the types of institutional arrangements, as may be necessary, to resolve complex water resources conflicts among competing interests, and to insure a balance between economic and environmental considerations.

SECTION 2. FLOOD CONTROL AND FLOODPLAIN MANAGEMENT POLICIES.

(a) STUDIES.-- The Secretary of the Army shall conduct studies to assess National flood control and floodplain management policies.

(b) CONTENT OF STUDIES.-- The studies conducted pursuant to subsection (a) of this section shall --

(1) identify critical water, sewer, transportation, and other essential public facilities which currently face unacceptable flood risk;

(2) identify high priority industrial, petrochemical, hazardous waste, and other facilities which require additional flood protection due to the special health and safety risks cause by flooding;

(3) evaluate current Federal, State, and local floodplain management requirements for infrastructure improvements and other development in the floodplain, and recommend changes to reduce the potential loss of life, property damage, economic losses, and threats to health and safety caused by flooding;

(4) examine the differences in Federal cost-sharing for construction and maintenance of flood control projects on the Upper and Lower Mississippi River systems and assess protection on the Upper Mississippi River and its tributaries;

(5) assess current Federal policies on pre-event repair and maintenance of both Federal and non-Federal levees and recommend Federal and non-Federal actions to help prevent the failure of these levees during flooding;

(6) make an assessment of Federal cost-sharing on a nationwide basis; and

(7) the Secretary will solicit input from the public and from other Federal agencies to ensure full examination of issues and options for improved flood control and floodplain management.

(c) REPORT.-- Not later than June 30, 1995, the Secretary shall transmit to Congress a report on the results of the study conducted under subsection (a).

SECTION 3. FLOOD CONTROL MEASURES ON UPPER MISSISSIPPI AND LOWER MISSOURI RIVERS AND THEIR TRIBUTARIES.

(a) STUDIES.-- The Secretary of the Army shall conduct reconnaissance studies of the Upper Mississippi and Lower Missouri Rivers and their tributaries to identify locations for subsequent feasibility study investigations that would most likely result in economically and environmentally justified flood damage reduction measures.

(b) CONTENTS.-- The studies conducted pursuant to subsection (a) of this section shall--

(1) reflect public input;

(2) include establishment of base conditions to fully assess economic and environmental costs and benefits associated with flood damage reduction projects and changes in land use patterns;

(3) identify options for development of comprehensive solutions for improved long-term floodplain management;

(4) identify potentially productive feasibility studies of specific projects or programs that would improve flood damage reduction capabilities for future events;

(5) assess the impact of the current system of levees and flood control projects on the flood levels experienced on the Upper Mississippi and Lower Missouri Rivers and their tributaries in 1993, and evaluate the cost-effectiveness of a full range of alternative flood damage reduction measures, including structural and non-structural measures, such as the preservation and restoration of wetlands;

(6) recommend flood control improvements and other flood damage reduction measures to facilities damaged by flooding of the Upper Mississippi and Lower Missouri Rivers and their tributaries; and

(7) assess the environmental impact of current flood control measures and the flood control improvements recommended pursuant to the section.

(c) COORDINATION.-- In conducting the reconnaissance studies under subsection (a), the Secretary shall consult fully with Federal agencies with water resources and floodplain management responsibilities.

(d) REPORT.-- Not later than June 30. 1995, the Secretary shall transmit to Congress a report on the results of the studies conducted under subsection (a).

The CHAIR. The Federal Government has an enormous stake in the protection of metropolitan areas. There is enormous Federal investment in the Federal levees, and also there is an enormous public interest in protecting these areas from the overtopping or breaching of these levees.

In testimony for later today, Richard Sparks, Director of the research laboratories, describes the way the construction of more and more levees have raised flood levels in cities such as St. Louis. He says, for example, "We already know that although the 1993 flow was about 20 percent less than the record flow of 1844, the 1993 crest was 20 percent greater, about eight feet, than in 1844. Analysis of the 1973 flood indicated a significant man-made contribution caused by constriction of the main river channels, bi-wing dams for navigation, and construction of the floodplains by levees for agriculture. Earlier, engineering studies on the Illinois River reached much the same conclusions following major floods in 1844, 1904, and 1913, 1922, 1926, and 1927. The recommendations were consistent: Set the levees back and use some of the levee districts to reduce flood stages."

The massive Federal levees at St. Louis capable of withstanding floods of 52 feet were nearly overtopped. Is it possible that flood height, pressure and velocity was made greater at St. Louis or at other Federal levees because of the location or design of non-Federal levees elsewhere on the river?

Lieutenant General Williams.

General WILLIAMS. That is a very difficult question and issue. I am not sure there is a short answer to that. As I stated in response to an earlier question, there has not been any study in regards to this current flood event that would give us an answer to the question you have right now. Depending on which engineers, scientists you work with, I think you are probably going to find out, as you get into this, they would have different opinions.

We have done studies on past flood events, and have some information with regards to addressing a generic type of a question. But we have not done any studies in this particular event to date.

The CHAIR. Is the risk to the public in these metropolitan areas and the potential cost to Federal taxpayers being increased by some of these unregulated private levees?

General WILLIAMS. Congressman, I am not sure I can answer that with a short yes or no. I think what we have to do in this particular issue is look at the total system. We are talking about an area—Congressman Nussle referred to it earlier—once you get down to where the mouth of the Ohio reaches in there, we are talking almost 41 percent of the landmass of the United States empties into that point and finds its way down to the Gulf of Mexico.

So I would be hard pressed to sit here today and say that some non-Federal or private levees in a certain area are going to increase the height, the risk, the potential for damage and so forth in certain areas. So I don't have a sure answer for you, sir.

The CHAIR. Then what kind of a study would it take, and how long would it take, for the Corps to make a comprehensive recommendation to the Congress about flood control in the Upper Mississippi and Lower Missouri, things like where the levees should be built, where they shouldn't, where should the river be allowed to

expand, what compatible uses could be allowed in parts of the floodplain where the river would occasionally expand, and all these other kinds of things Dr. Dickey referred to earlier I guess in a more comprehensive study of the area?

General WILLIAMS. Our estimate at this time and our preferred approach, if the Corps were asked to participate in such, would be to do two studies. One is the Upper Mississippi River and its tributaries and the other is the Lower Missouri River and its tributaries. We foresee we would do two reconnaissance type studies, about 18 months in duration.

In a sense, what you would be doing would be to bring together all the different interest groups, to include the States, obviously, and local communities, to identify the problems and the issues. Other Federal agencies are involved. We bring together the scope of the problem, make recommendations on where the priorities should be, so 18 months from the start of the study, we would be in a position to make some recommendations of where the priorities ought to go to identify what you need to do for the particular issues at hand.

Some of the issues that we talk about are structural and some are nonstructural, and there is a combination.

The CHAIR. Would you envision then that, say, the Corps would be in effect the lead agency of an interagency work effort on this, or would this be a Corps effort?

General WILLIAMS. For the reconnaissance studies I am referring to, the corps would be the lead, and we obviously would be bringing in Federal agencies, States, local interest groups, and so forth. There is a larger potential for a larger look at the problem, we were talking, as was referred to earlier, the interagency type of commission to be brought together, of which the Corps would be a significant part of that overall interagency look at the problem.

And the work that we would be doing, perhaps in the reconnaissance studies, would be a part of the information and effort the interagency group would be looking at.

Dr. DICKEY. I might add that as I mentioned in my testimony there that we have a number of short-term interagency efforts going on. One of the things I think it is very important to do within the next few months is to, on an interagency basis, lay out the various policy options, identify what are the key policy parameters here, identify what are the options that are available, attempt to inform the public of options, and perhaps begin to move toward a common understanding of what the major issues are, not only in terms of flood control, but floodplain use, disaster mitigation, and so forth.

That effort is under way now, and as I said, I see that as essentially providing a framework for the kind of technical studies which the Corps does in the context of its reconnaissance studies.

The CHAIR. Setting aside then the interagency approach, and talking about the Corps study that you are referring to, do you feel that you need a legislative mandate of any kind to proceed? Can you do it administratively? Can you do it within the context of the fiscal year 1994 appropriations language?

Dr. DICKEY. We do not believe, strictly speaking, we need any further authorizing legislation to spend the money that is in the

1994 appropriations act for those studies. We would like, however, the benefit, if you will, of a charter by the Congress. So, again, these issues are discussed and raised, and there is a common understanding of what direction you would like us to take on these studies.

The CHAIR. Given H.R. 2931, that is something that you would be willing to submit language for our consideration?

Dr. DICKEY. Right.

The CHAIR. That would be helpful.

Dr. DICKEY. Yes, Mr. Chairman.

[The information referred to may be found on p. 52]

The CHAIR. Then going to H.R. 3012, Mr. Volkmer's bill, you have already submitted to us suggestions as to what we would be doing, and we will be probably—I think it is next week we will be doing a markup, so we will be able to proceed on that.

Let me thank you again, all of you, for taking time to be here. We appreciate it and look forward to working with all of you. Thank you.

Mr. APPLEGATE. Thank you very much.

We do have a vote on the House Floor at this time. We will take a break, and we will be back in about 15 minutes.

[Recess.]

Mr. APPLEGATE. The gentleman from Missouri, Mr. Emerson.

Mr. EMERSON. Thank you, Mr. Chairman. I will be brief. I did have a couple of comments I wanted to make.

First of all, to Mr. Witt, I was interested when the gentleman from Iowa, Mr. Smith, was commending him, he said FEMA had gone about as far as they could go, and that reminded me of that old song from Oklahoma about Kansas City. But I think that is true.

I think FEMA did an absolutely wonderful job, in the course of the disaster this past summer, and truly you, FEMA, and the Corps and everyone that you were working with, really deserve the thanks commendation of the Congress, all the people you were trying to help and did help. When we have such governmental success stories, even in the midst of disaster, they should not be unrecorded. So I really do concur with Mr. Smith's remarks.

I was very interested in the line of questioning and conversation being pursued by the Chairman of the full committee when we had a break to go to vote, and I think he was on course there, in suggesting that perhaps the Durbin resolution needs to be expanded.

You know, when you stop to think about it, Mr. Chairman, maybe one of the problems in how we look at flood control in this country is that when you look back in history over the course of the last several hundred years, it grew up in a very parochial way. When people were moving west, settling on the Ohio, the Mississippi, and the Missouri, flood control is probably the last thing on their minds. To them, at that time, it was transportation. That was the only way they could get there, unless they are whacking their way through the wilderness.

So, you know, a few little settlers gathered on the bank of a river and that grew into a town and now we have great cities like Cincinnati, St. Louis, Kansas City and Memphis. You cannot move

them out of the flood plain. I think as this whole floods control subject has developed, we have looked at it probably too parochially.

One thing I find exciting about the Durbin resolution, and I am proud to be a cosponsor of it, I think at long last we are going to take a good look at the entire Mississippi Basin. It may be proper and correct that we need to really expand that and look at all the tributaries there, too, also.

As we certainly saw in full force this summer, what happens on the Raccoon River really does affect what happens in the Mississippi down at Cape Girardeau, the Illinois, the Des Moines; you just cannot escape it. These rivers are inexorably linked one to the other. I think we have never had a study of the whole problem. So you know I am strong for the Durbin resolution.

But if the Chairman of the full committee thinks it is too confining and we ought to go further, there is merit in that also. I am grateful to you, Mr. Chairman, in holding this hearing. I think it has been one of the meatiest hearings I have been to since I became a Member of Congress.

The data that has been presented is excellent. The thing I think the Durbin resolution can do is provide us with an appropriate framework to move forward in sorting out the issues that have to be sorted out that we have to address so we can do it in a systematic way rather than a piecemeal way. I think that is commendable.

There is, obviously, a lot of controversy on what lies out there in terms of flood control as we look at the future.

I think that the Durbin resolution can result in giving us a framework to go forward that will provide us with the opportunity of sorting some things out that are probably long overdue in being sorted out. I think something we can do, though, in the intermediate period, and that is going to take a while to accomplish, but I think we should also move forward with Mr. Volkmer's resolution. It is very bipartisan.

I don't think there is much controversy about it. It is something we can do now that would at least give some relief to some people. I have no further questions or comments. Thank you, Mr. Chairman.

Mr. APPLEGATE. Thank you very much, Mr. Emerson.

Mr. Borski.

Mr. BORSKI. Thank you, Mr. Chairman. First, I want to follow up something the Ranking Member suggested earlier in regard to Mr. Witt. Let me say that of all of President Clinton's appointments, and he has made some excellent appointments, none has improved as much as FEMA has under you and you are to be commended for that.

Mr. Witt, I understand that if households do not have flood insurance they may receive Federal disaster assistance which will enable them to rebuild in the flood-prone area. Does FEMA have any data that tell how many are rebuilding and do you think changes are needed in Federal policy to provide incentives to build outside the flood plains?

Mr. WITT. I think we do need to provide incentives to those participating because they encourage development outside the flood plain and keep people out of harm's way.

On the figures you were asking for, I don't have them, I will check to see if either FEMA or another governmental agency has such data.

Mr. BORSKI. Thank you. Mr. Dickey, Valmeyer, Illinois is a town which was ravaged by the flood and which received a lot of press lately, largely because of its plans to relocate outside the flood plain. Last week an article appeared in the St. Louis Post Dispatch which noted that the Corps plans to repair the Valmeyer levee at a cost of around $1.3 million.

Can you explain how the cost-benefit analysis supports this repair when reportedly only 15 to 20 families out of a total population of 900 are planning to remain in the low-lying area?

Dr. DICKEY. I don't know the statistics, but I would point out that the levee that protects that town protects a much larger area, so the justification may be in terms of protection of the agricultural lands alone. I don't know that that is the case, but I am saying that the two are not necessarily inconsistent.

We can provide you with something in particular for the record.

[The following was received from Dr. Dickey:]

In addition to the town of Valmeyer, the levee system provides protection to 46,000 acres of prime farmland. Though a portion of the town may be moved, the Federal interest to protect those residents remaining and the substantial high value agricultural land area by repairing the levee is warranted and economically justified.

Mr. BORSKI. On the Durbin legislation, while the Corps is clearly expert on the issue of evaluating flood control strategies, do you see any merit to having broad-based input for the study to the Corps such as through an interagency task force so that other interests and view points would be represented.

Dr. DICKEY. I think that would be very constructive. In any case, whatever the Corps does, it will be on an interagency, broad-based effort. I think, for example, one model we have is the Everglades Restoration Study which is a Corps study. We are working very closely, however, with the Department of Interior, the Department of Commerce and the Environmental Protection Agency so that what we do there is responsive to their concerns, but it is nevertheless a Corps study.

Mr. BORSKI. Is the Corps chairing such a task force? I know in response to Chairman Mineta's questioning you asked for the Durbin legislation. Shall we specifically suggest to you who should be on such an agency and would you have recommendations you may like to make?

Dr. DICKEY. I would like to give it some thought.

[The following was received from Dr. Dickey:]

I do not believe there needs to be an interagency task force formally established within the proposed legislation. As I noted earlier, the Corps will fully coordinate its study efforts with appropriate Federal, regional, state and local interests. At some point, it may be appropriate to establish one or more interagency working groups to address specific concerns or issues, and this could be done without specific legislation.

Mr. BORSKI. Thank you.

Thank you, Mr. Chairman.

Mr. APPLEGATE. Thank you, Mr. Borski.

Mr. Horn.

Mr. HORN. Thank you very much, Mr. Chairman. I was impressed with the Corps' record on the Mississippi. When you only have two levees out of several hundred that have a problem, that is a record in governmental effectiveness and efficiency that I wish every department had. I am particularly interested in some of the comments that Dr. Dickey made as to interagency coordination in this regard.

I want to raise a different area than flood, but also interagency coordination, that is under your jurisdiction. As you will recall, Dr. Dickey, in June 22, 1993, several of us in the House, including some members of their committee, and the two California Senators sent a letter asking you to expedite the so-called record of decision on the Environmental Impact Statement for the Los Angeles Harbor Feasibility Project. I would like to insert that letter, and letter of responses into the record at this point.

Mr. APPLEGATE. Without objection.

[Letter referred to follows:]

Congress of the United States

Washington, DC 20515

June 22, 1993

Dr. G. Edward Dickey
Acting Assistant Secretary
of the Army (Civil Works)
The Pentagon, Room 2E570
Washington, D.C. 20310-0103

Dear Dr. Dickey,

Earlier this year the Port of Los Angeles signed an agreement with LAXT, an American-Japanese consortium, thereby making a firm commitment to the shipping companies that the main channel serving the new Pier 300 would be sufficiently completed to permit first shipments of coal to begin in 1997. This is a significant agreement that will lead to important economic gains not only for Southern California but for the Nation.

The initial increment of dredging, which will be accomplished by the Port, is part of an overall plan that will result in an investment of more than $2 billion by the Port for dredging, landside infrastructure, dikes, wharfs and terminal facilities by the year 2000. Aside from the thousands of jobs created during construction, 250,000 people in the Los Angeles region will be employed by port-related businesses.

It is our understanding that in order to meet the timetable of the agreement, the Port must begin dredging in January 1994. Given the time necessary to get the final Section 404 Permit Application submitted and approved it is imperative that the Record of Decision (ROD) on the Environmental Impact Statement be signed no later that August 1, 1993.

We are, therefore, writing to urge you to do all in your power to expedite the review process that will permit a final decision to be made as to what constitutes the Federal Project and for the approval thereof by the Corps. We understand that all the review steps have been completed except for responses to some review comments from the Washington Level Review Center which need to be addressed by the Los Angeles District. It is also our understanding that neither the NED plan nor the EIS/EIR will change as result of the comments.

We would appreciate hearing from you as to what must be done for the Corps to complete action on the ROD by August 1, 1993. This is a very important matter to us, and we urge that you give this matter careful attention.

Sincerely,

Walter Tucker, M.C.

Stephen Horn, M.C.

Jane Harman, M.C.

Barbara Boxer
U.S. Senator

Dianne Feinstein
U.S. Senator

RHT

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0108

REPLY TO
ATTENTION OF

23 JUL 1993

Honorable Stephen Horn
House of Representatives
Washington, D. C. 20515

Dear Congressman Horn:

Thank you for your letter of June 22, 1993, regarding dredging at the Port of Los Angeles. You requested that a Record of Decision (ROD) on the Environmental Impact Statement (EIS) be signed by August 1, 1993, in order for a permit to be processed and to allow dredging to proceed by January 1994.

I can assure you that initiation of the Army Corps of Engineers evaluation of the Section 404 permit application is not dependent upon signing the ROD. In this regard, we have directed the Corps not to delay its evaluation once a completed application is received from the port. Unless substantive changes in the project require additional environmental documentation, the Corps will rely on the existing EIS for purposes of the permit evaluation. While the ROD will not be signed by August 1, the evaluation of the permit will not be delayed.

It is important to note that a decision cannot be made until a report and accompanying environmental documentation have been submitted, reviewed, and approved by the Assistant Secretary. While this office has reviewed drafts of documents, no final documents have been submitted for decision.

We are well aware of the economic importance of this proposed port development and will give top priority attention to the report and recommendation of the Chief of Engineers when it is submitted.

Sincerely,

G. Edward Dickey
Acting Assistant Secretary of the Army
(Civil Works)

Congress of the United States
Washington, DC 20515

September 10, 1993

Dr. G. Edward Dickey
Acting Assistant Secretary of the Army (CW)
The Pentagon, Room 2E570
Washington, D.C. 20310-0103

Dear Dr. Dickey:

Thank you for your response of July 23, 1993, regarding the Los Angeles Harbor project. Along with our colleagues who asked for your assistance, we extend our appreciation for your decision to instruct the Corps of Engineers to move ahead with the processing of the Section 404 permit while final processing of the feasibility study continues.

We have been informed that all the revisions to the permit application have been submitted by the Port of Los Angeles to the L.A. District and that the review period began on August 6th. In view of this, we request that your office keep us informed should any delays develop in the review procedure. Great expectations surround the commencement of this project, and we feel that it is appropriate that we be given adequate notification of your final action.

Sincerely,

Barbara Boxer

Joe Harman

Mr. HORN. You responded to that saying that the processing of the permit for the dredging of the Port of Los Angeles planned to undertake would be processed concurrently with the processing of the record of defense situation and the evaluation of the decision 404 permit application would not be delayed.

My understanding was that nationally the Environmental Protection Agency had cleared that. On September 10, however, we sent you a second letter to thank you for your response, that the Corps would move ahead with a Section 404 permit while the final processing of the feasibility study would continue.

We now understand that the Environmental Protection Agency Region 9 is holding up the process of the report and therefore the record of decision.

Now, since this project is of the utmost importance to one of America's and the world's greatest ports, which is the Port of Los Angeles, which is adjacent to the Port of Long Beach and together they are the largest complex in the country. What might we do in the Corps to expedite that process so that perhaps it could be issued in the next month or so?

Do you have any suggestions?

Dr. DICKEY. Well, we are very much involved in this. My Deputy Assistant Secretary that is handling this area has already participated in a meeting with the Environmental Protection Agency at the national level. We see that as a prelude to a meeting at the regional level so as to resolve, unfortunately, the remaining issues before the Chief of Engineers completes his report, because it is that report that provides the basis for the record of decision.

We have every commitment to attempt to resolve those issues. I cannot speak for the Environmental Protection Agency, of course, but I think that the message is clear. I think that the Administration is strongly supportive of the various initiatives to restore the health of the California economy.

I think this is an important step in that regard. So we will certainly be doing everything we can to resolve that.

We are trying right now, in fact, to set up a meeting at the regional level with national representation to resolve those issues so that the final outstanding issues can be resolved.

Mr. HORN. I appreciate that. I noted your comments on a question with reference to the flood situation, that if the Corps said, no, neither FEMA nor the Soil Conservation Service would say yes. I would like to know if the Corps says yes, and the Environmental Protection Agency says no, does the Corps decision of yes still hold?

Dr. DICKEY. This project is authorized subject to the approval of the Secretary. In this case the Assistant Secretary has that delegated responsibility. When I act it will be on behalf of the Administration. So, indeed, it will represent a coordinated, consistent Administration decision. It is not an independent action of the Army.

Mr. HORN. That is why I like pursuing the administrative management processes. There is such a thing as consultation. Obviously, as we know, we would like to build a consensus. What I want to know is where responsibility is placed.

After you listen to everybody, can you make a decision in the national interest, which may not be what a particular agency or group wants. As the law reads, I think you have that power, even

though you would like everybody to be on the same train leaving the station, you do have the power to make that decision, is that not correct?

Dr. DICKEY. Indeed.

Mr. HORN. Should we be encouraged that we might be able to dredge that harbor starting 30 days from now?

Dr. DICKEY. Indeed, you should be.

Mr. HORN. Thank you. I appreciate your patience. I have enjoyed this hearing very much.

Mr. APPLEGATE. If you noticed, that was "should" and not "will".

I think that pretty much covers the questions that we have for the panel. Thank you all very much for being here. It has been very enlightening and excellent testimony.

We have the Chairman of the Illinois Flood Recovery Task Force, Mr. Doug Presencia, who is the Chairman of the State Flood Plain Managers, Inc. Good afternoon, gentleman. Thank you for being here.

At this time I would like to recognize one of our very distinguished and honored and active members of the Public Works Committee, Tom Ewing of Illinois, who would like to introduce one of our panelists to the committee.

Mr. EWING. Thank you, Mr. Chairman. I would like to welcome both Doug and Al to Washington. As you noticed by your watch, it is now about 1 o'clock. That is 11:30 Washington time. If you want to know why we are late, it is the change in time from Illinois that makes us late.

I want to welcome you to this committee and to the hearing today. Allen has been a good friend of mine and somebody I worked with for probably the entire time I served in the Illinois legislation. Allen was with then Secretary of State, Jim Edgar, as one of his very top advisors.

With the election of Jim Edgar four years ago, not quite four years ago, as our Governor, Allen took on major responsibility with that good administration and has always served with great distinction and has been an exceedingly helpful ally of Governor Edgar.

I can understand why he looked to you with the tremendous amount of devastation and damage in Illinois from the flood. We are looking forward to hearing what you have to say.

TESTIMONY OF ALLEN GROSBOLL, EXECUTIVE ASSISTANT TO GOVERNOR JIM EDGAR, CHAIR, FLOOD RECOVERY TASK FORCE, STATE OF ILLINOIS, AND DOUG PLASENCIA, CHAIR, ASSOCIATION OF STATE FLOODPLAIN MANAGERS

Mr. GROSBOLL. Thank you. We used to take lunch breaks in the Illinois legislature. You remember those days. I will try to walk through my remarks and a few observations about some of the questions that have come up.

Mr. Chairman and members of the committee, on behalf of Governor Edgar and the citizens of Illinois I am here to raise some issues brought forward by the great flood of 1993, including what we believe to be the central issue, hazard mitigation.

The governor has strong feelings about this. However our legislature has been in session this week with a veto session, otherwise

he would have been here himself to provide these remarks personally.

I have been serving as the Chairman of our Flood Recovery Task Force at the Governor's request. I am pleased to be here today to give my support for the two bills that have been discussed here today, H.R. 2931 and H.R. 3012.

I want to applaud Congressman Durbin of Illinois and Congressman Volkmer of Missouri for introducing this legislation that improves how the Federal Government responds to disasters like the flood and that rethinks the national approach to flood plain management and hazard mitigation.

We believe these bills can prompt positive changes in both policy and process and help prevent future disasters from having as costly an impact on lives and properties.

The great flood of 1993 represents the worst disaster during the 20th Century for Illinois. Sixteen thousand citizens were forced out of their homes. Nearly 9,000 acres of farmlands were flooded. Entire communities were inundated. Hundreds of small businesses were lost and millions of dollars in personal property was similarly lost.

The full resources of the State of Illinois were used to fight the flood. We had nearly 9,000 national guardsmen called up. We had 300 or 400 inmates at various stages working on the flood, altogether close to 1,500 different inmates were used during our flood fight.

Millions of sandbags, millions of gallons of clean water were provided to the communities that lost their water. Just as our full resources were dedicated to fighting the flood, today we have committing those same resources to recovering from the flood. This has been a difficult, painful experience, but it also has provided opportunities, opportunities to employ the knowledge we gained from this flooding in an effort to reduce the impact that it can have in the future.

We will lose this opportunity again and endure significant hardship in the future if we respond to flood by merely repairing and replacing facilities without giving consideration to mitigation.

This is why Congressman Volkmer's proposed changes are so important and deserve serious consideration. This legislation will provide additional funds for hazards mitigation projects under Section 404 of the Stafford Act. Clearly, I believe the funds for mitigation are inadequate.

By increasing the 10 percent mitigation provision to 15 percent you will make more funds available for mitigation. By increasing the Federal mitigation from 50 to 75 percent, we will be encouraging and assisting communities to move toward mitigation actions.

Mr. Chairman in the last few months I have spent hundreds or probably thousands of hours with various State and Federal officials, municipal and county leaders and private citizens and there is a clear consensus that we should be encouraging flood plain communities to move in from threatened areas, and similarly there is a sense that we should be considering the buy out of critical levy districts and farmlands that are particularly flood prone.

Although we believe in mitigation and there is considerable support for buy outs and community relocations, our Federal policies

do not always, in fact, serve to encourage these outcomes. In fact, I believe we actually have disincentives in the Federal laws, Federal requirements and time lags all join together to make mitigation unappealing and often unavailable for flood victims.

Congressman Durbin and Congressman Volkmer are each proposing measures that head us in the right direction. We agree with Congressman Durbin that the Mississippi River needs to be studied. The effectiveness of our existing system of levies should be reexamined so our finite resources are more efficiently spent, with the abandonment of some agricultural levies, help the overall system and provide effective wetlands to abate future flooding. If so, what levies and lands should be targeted? Conversely, which levies should be our highest priorities?

We applaud Congressman Durbin's efforts to answer these questions. We also believe Congressman Volkmer's bill is critical. If we have a concern about that legislation. It is that this does not go far enough fast enough. Rather than relaxing some of the limitations on the mitigation funds we should be asking what is the function and effect of these reductions in the first place?

Should we not be discussing how to increase incentives for communities to move instead of merely raising the existing limitations? I hope the Volkmer and Durbin initiative succeed, but I also hope that they result in a broader discussion about our flood recovery strategies.

Let me mention a few examples of how we send mixed messages. Illinois flood communities are, or will be receiving 90 percent Federal reimbursement and public assistance funds to repair or replace infrastructure facilities affected by the flood.

If a community wants to move out of the flood plain to high ground, one would assume the public assistance funds could be applied to new facilities. After all, this would be consistent with our consensus that such moves are good.

In actuality we penalize the communities by removing 10 percent of their available public assistance dollars. Just to give you an example, we have the community of Grafton here. Another community in Illinois, Valmeyer, is looking to move. If they qualify for $100,000 to repair the damage to their water system, but they instead choose to move and build a $500,000 water system elsewhere, one would think they could take that $100,000.

In fact, they are penalized 10 percent and they only get to apply $90,000 of the $100,000. My question would be, isn't that a disincentive and isn't that the opposite of the message we are supposed to be sending?

Please let's give consideration to removing such penalties from the law. My question is why aren't we substituting financial incentives to encourage mitigation to replace the 10 percent penalty provision.

In the long run such financial incentives could be offset with the avoided costs associated with the next flood. When the $6 billion flood package was passed by Congress and signed by the President, it included funds for many agencies to carry out chores related to flood recovery. But I don't believe any single Federal agency was specifically directed to move communities, nor was a portion of the budget segmented specifically for this chore.

I realize there are dollars out there, particularly the $39 million that was mentioned by FEMA today. I still believe in the great scheme of things that this sentence is correct. Nobody was given direct authority or directive to move along these lines.

Also no specific agency was charged with responsibility to buy out levy districts and no line item was established to specifically fund the buy out of farmland.

If we want communities moved, let's be clear: authorize an agency to work with communities, give that agency a direct specific mission, provide a funding line item and hold the agency accountable. We have to do the same with farm areas and levy districts within the flood plain. We have government agencies with dollars that are offering to help communities move.

We appreciate these efforts. This commentary is not a criticism of those agencies. Rather it is my point that these agencies have program requirements and hoops for communities to go through that have nothing to do with the flood.

For example, EDA, the Economic Development Administration has $200 million available to help communities. But a community wanting to move must prove that the EDA funds will be used for jobs. Why create that hoop? Be direct about this. Say the funds are available for communities to move because we want them to move, not because it will save jobs.

I will tell you right now in the town of Valmeyer, which is one of the communities that is in the process of looking to move, EDA is one of the key agencies they are going to go to. EDA is saying, fine, we will bend over backwards. We will try and structure this so it clearly keys to jobs.

In the case of Valmeyer it will work because they do have a lot of jobs that they will be able to say are saved. But a town that does not have that isn't going to be able to easily for EDA because they cannot prove this job issue.

Why do we put a hoop in like that that says you have got to orchestrate this to fit around jobs? If the goal is to move them, let's just say it and do it. This example is typical of the kind of rules and hoops associated with community efforts to flood mitigation funds.

I hope my comments today are not viewed as a criticism of the Federal agencies involved in this effort. We would second many of the comments made today. We have had a good relation with these agencies and we have attempted to work closely with them. But there are systematic and statutory changes that could further help in the months and years ahead.

Two such measures are before you today. While Congressman Volkmer's bill will provide more funding for much needed mitigation projects, Congressman Durbin's bill intelligently calls for studies to insure that the mitigation projects are properly directed and designed. We urge your support of both bills.

Let me close by expressing Governor Edgar's appreciation for the congressional support for the Midwestern States ravaged by the flood. The Congress moved quickly and you substantially increased the funds that were in this flood package.

Thank you for your help and thank you for taking time today to consider ways to improve our flood fighting efforts.

Mr. APPLEGATE. Thank you.

Mr. PLASENCIA. Thank you, Mr. Chairman and members of the committee for inviting us to testify today. I am Douglas Plasencia. I am chair of the Association of State Flood Plain Managers. As far as my background goes, I am a professional engineer. I specialize in hydrology and hydraulics and I have been one of those people on the ground implementing flood programs throughout my professional career.

Our association represents those State and local officials who day in and day out make decisions regarding the National Flood Insurance Program, Corps of Engineer Flood Control projects, and SCS watershed programs.

For years we have been highly concerned about the fact that our Federal policies seem to be taking us away from what we believe to be the right direction for solving our flood protection issues in the country.

Today the testimony I will offer is on behalf of our association as well as the Association of State Wetland Managers. The thing that was unique about this flood in the Midwest was its duration and its extent. It was not unique for its level of severity as far as maximum stage and maximum duration. It was all over the place in that area. Its duration and extent is what was unique.

The focus that brought the country around was that for those people who lived in the flood plain, they were saying why is some other community's levee pushing water into my community or why is the levee in front of my house suddenly failing after years of protection?

People out of the flood plain were saying why are we pouring more Federal money for post-disaster assistance when we have done this 5, 10, 15 and 20, 50 years ago and on and on. We have been very supportive of the role of FEMA and the Corps of Engineers and the SCS in this recovery and likewise support the efforts they have taken.

We have been very supportive of the White House involvement in trying to coordinate many diverse and broad agency objectives and bring them together as a focus, while we certainly welcome congressional action in trying to fix some of the policies and authority that need to be fixed.

Some of the immediate concerns we see is quick passage of the Volkmer bill. That will be a very positive bill in helping to put on the ground mitigation into the recovery zone.

General support of flood plain relocation and acquisition programs such as through the hazard mitigation grant program, through the EDA funds and others is something that also needs to receive continued support. If the funding is not there to continue these programs it may be considered for funding down the road.

A concern we have in fact, and Allen discussed this today, is how are the Federal programs being packaged in the field? Yes, there is coordination and, yes, there is oversight.

But when you go to each and every community they are faced with dealing one on one with every agency. They are faced with dealing with independent rules, independent qualification criteria and independent regulations and only the most tenacious commu-

nities are going to stick with it and try and find that package that fits their needs.

We see the need to pull together these Federal programs in a disaster sense and saying these are our national objectives. They seem to be within the realm of your program. Let's get a simplifying qualification criteria.

Let's match the cost-sharing factors. Let's match the procedures so the communities can actually get something done.

My understanding is that the State of Wisconsin and the State of Minnesota have taken actions to try to do this by developing joint teams for a procedural standpoint, but there is still the regulatory qualification rules that need to be considered.

There are also technical concerns. Right now there is a lack of data allowing decisionmakers to make the key decisions they need to know. There is a lack of understanding of the total number of structures at risk. For those who would like to find acquisition and restoration sites, they lack knowledge of the areas that should be restored. These types of data are lacking.

There is a need to get the data and put them in a comprehensive data base that can be used through geographic information systems. I have not seen the bill that has been discussed today, but the two components that need to be considered with this Upper Mississippi study is that there is a technical component as well as a planning component.

It is our view that the technical components in the monitoring of basin hydraulics, the identification of natural areas is truly a function the Federal Government should be involved with. But the planning function, I have heard interagency participation in this, but it must start with State and regional participation in developing the plans that allow that model to make sense.

Lacking that State and regional support, what we are going to offset is another, the only way I can phrase it is a federally dominated flood control which may not be the most perfect solution for this basin.

We need to bring the State and regional players into this planning process early and possibly looking at models such as the Chesapeake Bay Act or other estuary acts where we have had multi–State jurisdictions looking at planning and policy authorities.

While the Mississippi flood was devastating, it should serve only as a wake-up call. That call is that our flood protection policies in this country are broken. I have heard earlier today the discussions of all that we have saved with the flood control policies that we have in place today.

In general, what we have established is a trade-off. We have established short-term protection for long-term catastrophic losses. I am not sure if our flood control systems today have given us a glimpse of what those catastrophic losses might look like in a Mississippi-type flood or not. The reason why we are looking at the catastrophic losses is that in general our flood control policies have been encouraging increased development within flood plains. That is something as a national policy we need to consider seriously.

In the last 25 years flood plain management has become a integral role of State and local governments. Fifty States, four terri-

tories and 18,000 communities now practice flood plain management.

The types of programs that these States and local people need and need to be addressing are, one, first of all, nonstructural flood plain management at this point in time is a drain on the Federal programs.

It has been talked about from a technical sense, but in reality receives very little support for implementation. So if we are to talk about a nonstructural flood plain management policy, we need to take steps to turn that into realities.

Second, we need to understand the communities with local cost share and State cost share components are faced with overriding burdens and limited resources, yet we deliver packages as single programs.

It is difficult for a community to deal with flood protection needs while at the same time dealing with waste disposal needs, urban development, and what have you. There is a need to develop a Federal response to communities that have addressed multipurpose needs within those zones.

There is a need to recognize that these decisions are locally driven. Right now much of our current system in flood control is producing studies rather than results, at great cost. The reason is because the flood control projects that are out there yet to build today are marginal projects, being that we cannot economically justify them for their initial long term recovery costs and; two, the environmental mitigation concerns greatly overweigh those projects.

What is happening is in States around the country we are developing feasibility reports at two, three, or $400,000 apiece and then they get shelved because they are not feasible. There is a need to find a way to streamline that study system, but also take money and put them into nonstructural solutions in the grounds.

The challenge that faces us is that we have developed a system where our policy shall put a boxer in the ring who can only throw one punch. That is the flood control punch. We need to develop a boxer who can throw a nonstructural punch, throw a left hook and do some fancy foot work and help the communities and develop a well-rounded athlete out there.

Currently, as I say, we have a one-armed boxer. What we need to do with our programs is we need to shift their focus from being top down driven programs to that of being diplomats and brokers. There needs to be a recognition that State and local partners are key in funding and in the successful of programs and we need to develop a mindset within the Federal agencies that they are there as full partners and not there to direct ultimate action.

That, in a summary, is the concern of our membership and the concerns we are expressing today. Thank you for this opportunity.

Mr. APPLEGATE. Thank you for your testimony and telling us what you think needs to be done. Perhaps by next week we will be looking at a markup and by that time maybe we will have some corrections and additions and make it a little better.

Mr. Grosboll, you said there were incentives and disincentives for buy outs. I have two questions: One, does your State have the ability to financially assist buy outs?

Mr. GROSBOLL. I would say we have the ability to help in relocations. Only the buy out becomes more technical in terms of our ability to buy out a house, for example. That is more in the realm of the Flood Insurance Program and other FEMA issues.

Where it is the buy out of a community and we are looking to move in a community like Grafton and you will hear from their mayor and the other communities, we have several agencies in the State government that provide various forms of assistance.

Right now we have about a dozen State agencies that are working with several communities seeing how we can do that. The States are not going to have overwhelming sums of dollars to do this. We have incurred close to $20 million of costs fighting this flood, all of which was not in the budget this year in the State of Illinois, but we have come up with it. In fact, we have some capability to do that.

Mr. APPLEGATE. You mentioned using the example of the repair or movement of, say, a water plant based on 90–10 if it is going to be repaired, but if you are going to build a new one, where there has been a complete movement of the town and it costs $500,000, you would still only get 90 percent of the $100,000.

What makes you think, that it would not be an amount or a percentage of, say, the $500,000 that it would cost to build the new plant?

Mr. GROSBOLL. I am repeating what Federal officials have told me from FEMA when we walked this through with them, that if it is a $100,000 damage, it is a 90 percent–10 percent match.

If they want to take those dollars and put it into mitigation instead they would get 90 percent of the 90 which would be 1,000. I have walked that through with FEMA half a dozen times and get the same answer every time.

Mr. APPLEGATE. Wouldn't it be a difference if there was a home? Wouldn't they buy that home on 75–25 and if your home is down there and you can repair it, say, for $50,000 or you go into another area for $100,000?

Mr. GROSBOLL. The problem is when you are dealing with a home you get caught up in other complexities dealing with the Flood Insurance Program, were they in or were they not. I have been working with the communities on infrastructure issues which are the tough ones for them to deal with.

They are trying to rebuild a sewer system or replace a water system and this is one of the kinds of things they are running into. If they want to take their pot of money, they take a 10 percent hit. No one ever denied that is the case. FEMA tells me that is what the policy is by law.

Mr. APPLEGATE. I will take a look at that. You talked about disincentives and hoops. You were talking about the economic development agency and their money. But that program is designed specifically for jobs.

Now, you are saying that that is wrong and you could lose out from getting EDA money strictly because it might not necessarily produce the jobs.

Mr. GROSBOLL. The EDA administrators are doing their job. They have funds for these programs and the programs have written into the law guidelines they must be following. I have abso-

lutely no-fault with how the EDA has approached this. They are doing everything they can to bend over backwards.

What I am faulting is that we have come in the back door. Take Valmeyer. We wanted to help them move. We don't have a specific large pot of money to help them move. We have to look around and find somebody who got a large chunk of money in the flood, approp and say to them, how can we somehow finagle this. They will say, well, can we somehow stretch this to say you are saving jobs? We go, well, we might be able to. And they go, good.

I mean the phrase, "we will bend over backwards," has been used a lot. That is fine. But what happens when we move to another community that has no industry? Valmeyer has one business. It is a community of 900 and it has a business where a couple hundred people are employed.

The formulas will kick in and Valmeyer will get a lot of EDA money for that. Take another small farming community that has no business other than a grocery shop. They could have nothing. They could show there is no economic development there at all.

Rather than saying to these communities we know this doesn't make a lot of sense, but you have to show this has to do with jobs and if you can do that we will get you money. If you can't do that, we will have to shop somewhere else.

My point is I wish we could have said there is $200 million available to help communities move, period.

Mr. APPLEGATE. I can understand what it is you are trying to say and trying to get as much money appropriated as you can to help the communities. I am not sure how much it will help with EDA. It is designed for a specific purpose.

I worked that program for several years and struggled with it for the same reasons to try to get money out of it so as either to preserve or add jobs on. At any rate, I appreciate both of your testimony.

You both support Durbin and Volkmer?

Mr. GROSBOLL. Yes.

Mr. APPLEGATE. I think you had sort of a question on your mind earlier about Volkmer, maybe it did not go far enough.

Mr. GROSBOLL. Right now it says that if your communities have mitigation situations there is a 50 percent watch required. That basically means the program would never have been used under the current situation, not until everybody else's money ran out.

Now, with that 75 percent provision I suspect they will get used sooner, but again they will be at the end of the line because EDA will fund at 80 percent, Farmers Home will fund at 100 percent, and there will be a few other programs that are funding at 90 percent.

My question is, if mitigation is our number one priority and encouraging people to move, my question is why aren't we taking that a step further or removing this so-called 10 percent penalty that I referenced earlier?

If the community wants to move, why not, say, take 110 percent if they will move and never have to come back to us again with this problem.

Mr. APPLEGATE. It would be nice to think that we would never have to be back again.

Mr. Boehlert.

Mr. BOEHLERT. I want to thank both witnesses for your testimony. Mr. Grosboll, please don't use the EDA example. I understand what you are saying, that you would like to have the pot of $2 million. I understand that.

But EDA is the one agency of the Federal Government that is assigned this awesome task of preserving existing employment opportunities, and creating new jobs. $200 million is petty cash. We have a little problem here called the national debt, over $4 trillion.

We spend $900 million every 24 hours just in interest on the debt. That does not solve an unemployment problem. It just services the debt.

While I am sympathetic of your plight, you have to be understanding about our predicament, too. I appreciate your excellent testimony.

Mr. APPLEGATE. Mr. Ewing.

Mr. EWING. Just one question. Shouldn't we make a differential in buy out in regard to agricultural lands and residential lands?

I guess my thought would be on agricultural lands you could almost buy the air rights like we do on an airport and from there on if it floods it is not a problem.

What would you do with that land, the thousands of acres that have been in agricultural purposes if you bought it out?

Mr. PLASENCIA. As far as the buy out of agricultural lands, it is difficult. There will be some continued agriculture production, but I think the one thing that has been talked about, and it needs further discussion, is the whole idea and concept that right now with part of the ASCS Crop Subsidy Program people are paid not to produce agricultural crops on their properties.

Currently, many of those lands are in upland areas. There has been a suggestion of a no-dollar fix where to allow the farmers in upland areas to farm those lands and transfer those subsidies to the flood plains to allow people to evaluate the system and make decisions.

It would be one effective way to deal with the short-term and possibly the long-term management of the agricultural flood plain lands.

Mr. EWING. That is true. I am familiar with that proposal. That is because some of these lands cannot be put back in production for a year at least. We also, I think, know that some very rich and fertile farm land was in the flood plain in Illinois.

I am not sure it would be a wise use of our resources not to farm that. That had always been part of having a river bottom farm in some years when there were floods.

Mr. GROSBOLL. Let me answer also. There certainly should be a distinction in our priorities as far as what comes first or what matters the most to us at this point, the communities, the homes versus the farmland.

I would say in our case in Illinois working with the towns of Grafton, Valmeyer, Miota, Montoosic and on and on, helping those communities figure out how to get moved and how to package up State and Federal programs is our highest priority.

The issue of the farmlands, I think, deals more with a longer term issue of getting a better understanding on whether or not as

we have built these levies and constructed the river, have we not created some of the problems we are seeing downstream?

That question was asked earlier today. It seems to me it is only logical that as you constrict, you raise the level of water and it creates problems elsewhere. To the extent that we have one that is our first priority and we don't want to ignore the second one, we do think the farmland property should also be looked at.

We would suggest that we take a look at those farmlands that maybe are not that valuable. We take a look at those areas that maybe would serve better as wetlands, as sponges, if you could use those words, and we try to target the areas that the scientists would say are the best ones we ought to go after.

Mr. APPLEGATE. Thank you very much. We are going to take a brief recess here and we will be back in about 15 minutes.

[Recess.]

Mr. APPLEGATE. We have Gerald Nairn, Mayor, City of Grafton, Illinois; Richard Sparks, Director of River Research, Laboratories of the Illinois Natural History Survey; Gilbert White, Director, University of Colorado, Natural Hazards Research and Applications Information Center; Annie Hoagland, Chair of the Alton Lake Heritage Parkway Commission; Scott Faber, Director of Floodplain Programs, American Rivers, accompanied by Constance Hunt, attorney with the World Wildlife Fund, and Timothy Searchinger, attorney for the Environmental Defense Fund.

I guess everybody is here. Looks like we are. Okay. And the way we have it set up here, we will begin with the Honorable Mayor of Grafton.

STATEMENT OF HON. GERALD NAIRN, MAYOR, CITY OF GRAFTON, IL; RICHARD SPARKS, DIRECTOR OF RIVER RESEARCH, LABORATORIES OF THE ILLINOIS NATURAL HISTORY SURVEY; GILBERT WHITE, INTERIM DIRECTOR, NATURAL HAZARDS RESEARCH AND APPLICATIONS INFORMATION CENTER, UNIVERSITY OF COLORADO; ANNIE HOAGLAND, CHAIR, ALTON LAKE HERITAGE PARKWAY COMMISSION, ALTON, IL; AND SCOTT FABER, DIRECTOR OF FLOODPLAIN PROGRAMS, AMERICAN RIVERS, INC., ACCOMPANIED BY CONSTANCE HUNT, ATTORNEY, WORLD WILDLIFE FUND, AND TIMOTHY J. SEARCHINGER, ATTORNEY, ENVIRONMENTAL DEFENSE FUND

Mr. NAIRN. Thank you, sir.

Like you say, the longer you go, the worse it gets. It looks like my council meetings.

I have got to tell you a little story. Nobody is here. Some humor came out of the flood, anyway. You have got to realize, I have been mayor for 29 years. I have been in 10 floods, and it is the first time the Vice President of the United States ever visited our community. And you had senior citizens working about five phones in the front part of my office. They had me in the back with some coordinators, feeding me some information to try to get people moved out. We have got it down to a science.

Anyway, we had no idea that the Vice President of the United States was going to be in our community in the next eight days. I walk up front and I see one of my senior citizens holding a phone,

and they looked at it very strangely and hung it up. They said, I must be nuts. They said, It is the White House that just called. You know, that was a prank call.

About that time, the phone rang again and I picked it up myself, and it was the White House. And they said, "Don't you hang up on us. This is the White House."

I started laughing. I didn't think it was very funny. He said, What is so funny? I said, I don't have the White House calling me every day asking for advice. He said, Where is the Secret Service? I said, How do I know where your Secret Service are? If you need our police, they are right here.

Finally he said, "Let's start over." Number one, he said, "The Vice President of the United States is going to be in your town." Then I began to know what he was talking about. But we had the opportunity to joke around town that we had hung up on the White House. We want to make sure we catch your ear this time. We are not going to hang up.

You have heard about everything that has happened during this flood. My name is Windy Nairn. The history a little bit of Grafton. Grafton is located about 40 minutes from St. Louis, downtown St. Louis. I have lived in Grafton for 62 years of my life. I have been mayor for the past 29 years. Grafton has suffered many, many floods. Too many, in fact. But the last—since 1969 we have had 10.

Grafton in the past has handled flooding down to a science. If you need a flood coordinator, call me. I will be there. We have got it down to a science. But those were smaller floods, 28- to 30-foot floods. Never did I ever think that I in my lifetime would see a 38-foot flood. And that is what we had.

We surveyed the people, and after surveying the people we had 90 percent of the people who said, Mayor, let's get out. In the summer of 1993, naturally, as I said, it went five feet higher than ever. My home was affected. My wife and I since July the 2nd have been living in a trailer. We haven't killed each other yet, but it is getting close. And the citizens have been living in tents, garages, with relatives, friends, pick-up trucks, and trying to survive.

Grafton's population has dropped drastically. During the summer here, when we had the flood, which lasted six months, we had 203 houses that took water out of 383 homes.

Our grade school has declined drastically. It went from 153, which we normally have 210, and the principal is telling me it has been declining every couple of weeks here, people moving out.

Businesses are closed during the flood. We are a town that does not have anything, no industry. We are a tourism town. And we have 60 businesses in town, and only three—I repeat—three is the only operation we had during the six months.

So we have lost $140,000, roughly, in our budget, with a little over $380,000 to keep our community running. With the loss of this tax and income, Grafton will be broke January 1, 1994.

The floods are very costly. They are costly to the citizens, to the States, to the counties, and to the Federal Government. We do not want to come back to Washington again and have to beg to help us out during another high water. I am sure it could happen sometime.

So Grafton came up with a plan, and on August the 20th, immediately after the bad flood, on August the 20th, we came up with a plan. It was brought to the Vice President, the President of the United States, and some Congressmen, and also I have some copies with me if you would like to have them today.

Here is a part of the plan, gentlemen. Help Grafton recover from the flood of 1993 with guidance and funds. Number one, remove flood-damaged homes and business along the river. Turn it into green space, parks, marinas and wetlands. Help our people rebuild and locate in new homes out of the floodplain. We want to get our town back. They want to come back. But we are greatly torn up right now.

We have some people that have annexed property that is out of the floodplain to our community. We have already started the annexation. I have that verbally. And we are getting that drawn up.

Then we want you to help us rebuild the infrastructure, the new water plant. We are putting in for grants for those. We are working on that.

Help us rebuild some roads. Eighty-five, I repeat, 85 percent of our community was cut off for six months. We either went by boat or over the top of the hill or walked. And if we can get some roads in and out of there, then we will be able to get back to halfway normal.

Our top priority, our top priority, the citizens of Grafton and I don't have the expertise for the day-to-day operation to obtain government grants and to rebuild the town. Now, what I am asking for, and need some consideration on, we need it now, is Grafton needs a full-time coordinator and project manager, and we can locate him in Grafton. We have other communities around us.

All we are saying is, well, we have got to get out of the water. But we are ready to go. We don't want to be held back by other communities. We have got plans. But I don't have the expertise or anyone in my community to be able to deal with all the Federal agencies here. We need somebody that has that expertise.

Vice President Al Gore was in our town July 13, Carol Moseley-Braun, Governor Edgar, James Lee Witt, and they saw the devastation. Thanks to FEMA, we have 50 trailers in our community that victims are using at the present time to try to decide or wait for a buyout or whatever we are going to be able to do.

Now, we urge the President to please make us a model city, that he can be able to say to other communities, Go look at Grafton, they got out of the flood, they are asking for help, and we helped them get out, so we don't have to go back and spend my taxpayer dollars and your taxpayer dollars to keep rebuilding the community.

Yes, January the 1st, we will be broke. The future of Grafton is in the balance. We need immediate help.

I have three questions. How can we get help to save our town from bankruptcy? How can we begin to rebuild Grafton for the future? And how can we obtain a project manager?

The City of Grafton has realized that we have had a number of floods, and that it is time that we follow the most sensible route and the best solution, and that is relocation. And we certainly do

have a plan to that effect. It has been sent, I have that to you people.

Please help us get out of the flood, make our town flood prone the best we possibly can.

We support House Bill 3012, the Volkmer bill, and Dick Durbin. We sincerely thank you for your time and efforts here, for me to be able to talk to the board. And I would like to leave you one thought.

With your help, tough times never last, but tough people do. And we are tough, and with some help we are going to get out of the flood.

And I thank you, Mr. Chairman. God bless you.

Mr. APPLEGATE. Windy, you sound like you are tough.

Mr. NAIRN. I am tough. You can get on it.

Mr. APPLEGATE. That is good.

Next we have Richard Sparks.

Mr. SPARKS. Thank you.

I was Director of two River Research labs until the one by St. Louis washed away. I guess my only excuse for being on the floodplain is that we have to be by the river, and we are prepared to pay the consequences.

The major news I bring to this hearing is that trends in rainfall and flooding indicate that flood-related damages will increase in the future unless we change the way we manage water in the Upper Mississippi Basin.

In the handouts I have given, there is one table and five figures I would like to go through very quickly. The first is simply the table of 10 top-ranked floods in the Mississippi River. And I would only like to make one point before skipping on, and one is that the 1973 flood, when it occurred, was called the 100-year or 200-year flood. Recently, it has been downgraded to a 30-year flood.

What that means is that major floods are occurring with increasing frequency, and we don't really know that the 1993 flood, as I have heard some people say, is the 500-year flood, and therefore we don't have to worry about it occurring again. In fact, it might occur much more frequently than that.

And the next set of figures indicate why. Figure 1 simply shows that at four weather stations in the Upper Illinois Basin, the trend is toward increasing precipitation through time. The next one shows that as a result of that, we are getting increasing average flows, and increasing flood flows in that basin through time. And I should point out these do not include the 1993 data which would boost it up considerably.

The next figure shows the duration which was spoken about earlier. If you are in a levee district, you are very concerned about flood duration, because the longer that water sits against the levee, the more saturated it becomes, the more pumping you have to do. And the pumping costs for each thousand cubic feet per second flow range from about 10 cents to 45 cents per acre.

The next one shows that in the period of record at St. Louis, from 1861 to about 1927, there was a stable relationship between flood height and flood flow. If you look at that graph, you can see on the right side that there are tremendous fluctuations developing since the 1930s. So in essence the Mississippi has gone into disequilib-

rium. It has been destabilized. The highs are getting higher and the lows are also getting lower.

Finally, the last figure is a cross-section of the river showing various alternative uses of the floodplain and some recommendations that have been made about setting the levees back. Not only is the rainfall increasing and the actual flow in the river increasing, but the capacity of the floodplain to convey and store floods is being diminished by excessive sedimentation.

We have choices to make. There is a limited capacity on that floodplain to convey water at a certain height. And we have to choose whether we are going to use that capacity with levees and where we are going to put those levees.

I think it is obvious. Everyone agrees that we have to protect the cities. There is an enormous investment there. But we need to look carefully at the other areas and see whether in fact we can maintain all of them. The cheapest form of flood protection indeed may be to buy out some of these less-effective levees.

Now, I would like to mention one other thing, and that is we talk about economic losses if we take agriculture out of the floodplain. I haven't heard anyone mention the economic gains.

There has been a study done just released by the St. Paul District of the Corps that surveyed 76 counties along the Upper Mississippi river. This is a very conservative estimate that the river recreation generates $1.2 billion in the Nation—that is billion with a "B"—and 18,000 jobs. And that was not all the counties, that was just 76 counties that were surveyed, and it did not include all the recreation activities. So I feel it is a very conservative estimate.

The other thing to keep in mind, what is missing from that picture in figure 5 is that some of those levee districts now are actually below the low water level in the river. That is, they will not drain by gravity. They actually have to be pumped out. And they are chronically below water level, which means they incur pumping costs all the time.

There are a few levees that in fact have broken 12 times since 1935.

So, again, I come back to the choices. We are going to have to make some hard choices. If we don't, we will only see the flood heights become greater and the great floods come more frequently.

Thank you.

Mr. APPLEGATE. Thank you very much, Mr. Sparks.

Mr. White.

Mr. WHITE. Mr. Chairman, I submitted some written comments. I don't intend to read those but I would like to make a few additional observations that came from hearing the testimony which you have had this morning.

I have been associated with problems of flood policy in the United States since I first became involved with the old Mississippi Valley Committee in the 1930s. I was involved in the arguments about the Flood Control Act of 1936. I chaired the committee that recommended the establishment of flood insurance. And I was chair of a review committee on the assessment of floodplain management in the United States last year.

Against that background, I would like to make one general observation about the way in which flood policy has evolved in the Unit-

ed States, and then make a few comments on what I think are the opportunities your committee has this fall and winter to deal with the next stage of development of flood control policy in the United States.

If one goes back to 1851, the great flood in the Lower Mississippi, one finds that typically, when a great flood occurs someplace in the United States, it follows that there is some readjustment in Federal policy by the Congress. So, for example, you had the leveesonly policy that was developed by the Corps of Engineers' studies following those 1850 floods that prevailed until 1927.

The great flood of 1927 showed it was impracticable to pursue that policy, and a new policy was established in the Flood Control Act of 1928. But even before the 1928 act, and I think the Congress sometimes may not recall this, the Congress in the rivers and harbors bill authorized the so-called 308 reports, which established comprehensive studies in basins all over the United States that set the framework for water development in most of the country for decades to come.

For example, it was there that the idea of a plan for the Tennessee Valley took shape. It was taken out of the Corps of Engineers for administration, but it shaped up as a result of congressional action in 1927.

In 1936, after the great floods in the Ohio Valley, which you may recall hearing about in great detail, the Flood Control Act of 1936 dealt with the big issue of whether or not Congress would undertake heavy Federal financing for flood control projects around the whole country, and also whether it would give any special attention to soil conservation and forest management practices. It finally resolved that latter issue by establishing the Soil Conservation Service watershed treatment programs and forest watershed programs, but kept them independent of the Corps of Engineers engineering works.

The act of 1938, after there had been heavy losses in the Ohio Valley, made Federal reservoirs 100 percent Federal projects, and set the tone for Federal activity with respect to floods in the United States for years to come.

About 30 years later, in 1966, there was a task force at the Bureau of the Budget that recommended the insurance program and recommended a program of comprehensive floodplain management by the Federal agencies. President Johnson adopted that as an aim, and it has remained on the books as an aim for a long time.

It was not until last year that the group of Federal agencies, the interagency task force, brought in a report which assessed where the United States stood in dealing with floods, and which asked in very hard ways, why it is that the annual damage from floods has been increasing on the average, year after year, ever since the big construction works began. There finally has been serious consideration of why we don't have a genuine integrated floodplain management program in the United States.

That report was addressed to the agencies in general. The previous administration paid no attention to it. There was no water resources council to deal with it, and it has simply remained available in the last year until the Mississippi flood brought the matter back to public attention.

After each of these great floods there generally has been, but not always, a response on the part of the Congress to establish a new policy that improves on the previous one, tries to deal with some of its deficiencies, and then tends to stand on the books for years or decades to come.

The argument I would make today is that this Congress has the opportunity after the Mississippi Midwest floods of last summer to enter into a new and truly historic stage in dealing with floods in the United States.

The situation this year is different than in any of the previous situations, for several reasons. One is that there is now general agreement on the desirability of floodplain management in contrast to flood control. You saw that beautifully illustrated today by the testimony from the Department of the Army, from FEMA, and from the Department of Agriculture.

I would say this is the first time in history in the United States that you had a conjunction of those quite different views. This means there has not been an adoption on the part of these agencies of just a single solution as has prevailed so often in the past, but there has been an agreement that dealing with floods involves control works, land-use planning, disaster assistance insurance, flood proofing, biological use of lands, treatment of lands for both agricultural and environmental purposes.

We no longer face the simple confrontation of environmentalists and engineers. We now face the argument of some people that it is undesirable to provide assistance to sufferers without providing some means of mitigation. I would like to suggest to the committee that you have an opportunity that probably will be a window that won't last very long.

It is no longer a problem of unified agency view at the Federal level of the importance of floodplain management and how it should be carried out. It is no longer a problem of having the States recognize their responsibility to help the local groups find what for them is the proper solution for their local situation. And there is no longer the contest among major sectors in our society about what such a management program should be.

I think there is an immediate issue of the strong demand for prompt action from those communities that suffered during the flood last summer. That is not an easy one to resolve. It is not easy to promptly take a position about whether levees should be built or rebuilt or strengthened in the very near future. That is going to take a good deal of time for study in many areas.

It may not be an issue for some city areas, but for many of the agricultural areas it is not going to be easily resolved. But the point is we have the machinery within the government now, and by and large the basic policies in which it will be possible in the years immediately ahead to work out programs that suit the needs of particular communities, rural and urban. In doing that, we not only will be able to arrive at what will be reasonable kinds of conclusions meeting local needs that will be sustainable but will not lay the groundwork for another great flood disaster. Such a policy will be applicable to other parts of the country, where surely the same issues will arise.

This is a marvelous opportunity which this committee has. It has the Federal agencies coming to it with the kind of testimony you have had this morning. It has the States in a unified fashion telling the kinds of contributions they think they can make to the local people represented here at the table.

If you can find ways of coping with the demand for immediate action without adequate study, and I think there are some such ways, then you may be moving into what will be a whole new era of resources management in the United States. That window of opportunity probably won't last more than a year or two.

Thank you.

Mr. APPLEGATE. Thank you very much. I hope we can fulfill all of that. You hit many of the nails right on the head, and it was very excellent testimony.

Annie Hoagland.

Ms. HOAGLAND. I am going to use the slide projector.

Mr. APPLEGATE. Sure. Go right ahead. Do you need any of the lights dimmed?

Ms. HOAGLAND. Thank you for allowing me to come and testify. I am from the Alton Lake Heritage Parkway Commission, and I think I am going to tell my story with a few slides, if that is all right.

The Alton Lake Heritage Parkway Commission is a local planning commission that was mandated by the General Assembly of the State of Illinois. Our mission was to provide a land management plan for a portion of the Mississippi River. We are the first heritage corridor along the Mississippi River and the first land management plan, according to the National Mississippi River Heritage Feasibility Study Corridor. Our task was mandated, and we have worked very hard to come up with a plan, and we have come up with it, and it has been voted on and the Governor signed it.

Twenty years ago I came here in the 1973 flood because we had a situation where we had the State of Missouri wanting to build a levee across from us, and we felt that the best use for that land would be in floodplain. And so we were concerned that this would create development just north of St. Louis and the floodplain.

Fortunately, that levee wasn't built for those very same reasons, and some of the reasons you heard today about the chute effect and so forth with levee building.

This is the area there. I don't have a pointer, but you can see our corridor area. We are quite a sizable corridor. We are almost the entire watershed. It is an ecosystem.

The frustrating thing about this corridor is that, just like a bird doesn't know if it is in one State or another, most of the information that we were inventorying was of both States, because it was either environmental or historical. So our feeling was that we were only doing a portion of the area, although we had information for all of the area.

This is a particularly strategic area because we have three of the Nation's greatest rivers that come together there, and we have a huge confluence floodplain right across from the heritage corridor. And I think maybe I should mention at this time, we are looking at a 30-minute drive from the City of St. Louis, and urban sprawl is sort of backing up into our area.

I just want to flip through a little bit of what we have. Those are the bluffs looking over the river. We have the vistas of Missouri looking out on that floodplain. This is an Illinois prairie glade above the floodplain.

Inventorying all this information, we came up with a pattern. This is just like being at home. The projector doesn't work.

This is the floodplain area at RiverLands. This is the environmental demonstration area of the Corps of Engineers.

Anyway, after surveying the area and inventorying it for two years, we networked with all the different governmental agencies and we had 40 communities meetings and we did a view shed survey, and we came up with this pattern. We came up with a land management plan for our side of the river.

Still, we were very frustrated, because the urban sprawl, in spite of the fact that there was no levee, was continuing. If you look over the area and you realize they are going to flood again, it has always made us nervous and we always felt like the State of Missouri should join us in doing their land management plan. So it was very frustrating to gather all this information about them, yet not be able to use it.

So this is the confluence floodplain, and we would be located above the area, and the kind of studies that we need along the rivers are from bluff to bluff. We need the whole river valley. And where you have a State line, you have to have both States cooperating. You see the little dotted line up at the top and the little dotted line coming across the bottom——

Mr. APPLEGATE. May I ask, you could walk up there with that, then you could talk about some of those areas.

Ms. HOAGLAND. This is the bluff line in Illinois, and this is the area we are studying, right there.

Now, the bluff line comes down here. There are no levees in Illinois. Here is where Grafton is, the town that Windy Nairn just spoke about. We have historical villages on the National Register of Historic Places up here. This was a crossroads archeologically of the whole country at one point, with lots of ancient civilizations around the bluff line.

Then you have the St. Louis sea-wall. Then the bluff line comes along here, and the St. Charles bluff line going back this way. And this whole confluence floodplain is an area that was very much under water during the flood. This is the United States Corps of Engineers' RiverLands.

Backing up just a minute, I will go back to the flood. After the 20 years in 1973 and the flood, in the study that we undertook and the frustrations of not being able to have an interstate group working on this, then we have the 1993 flood and everything changed.

You can see our water company, which is under water. Many, many water companies were under. They all needed to be relocated to higher ground. We were all out of water for almost three weeks.

This is the road to St. Louis. It looked like a causeway. We lost the ability to go to St. Louis this way.

This is the new Melvin Price Lock and Dam. That pretty slide I showed you of the floodplain now looks like this. The RiverLands would be out in the distance, and I believe your office, you could

probably see his office, that little cluster of buildings out there in the middle of the slide.

These are the Corps of Engineers' cabins along the rivers. They are all up and down the rivers. Congress has permitted the corps to lease these cabins. This accounted for a good deal of damage that we had along the way, because these cabins all were floating up and down the river, and ran into other things.

One of the things that we are asking you to do is to change your policy of allowing the Corps of Engineers to lease these cabin sites, because we really feel, at least in our area, that that is not a good idea, to have people building homes out in the floodplain like that or on the islands.

Here we are back to the confluence floodplain. And now I would like to tell you a few of the things that we thought we would like to do if we would make a pilot project of this whole area. I have heard a lot of Band-Aid solutions in the last 30 years. I don't think I have heard too many new things.

The floodplain insurance is one thing that came up, that we had high hopes for. But I keep hearing about more levee building, and I don't hear any refreshing solutions to some of the problems that we have. Relocation and mitigation, I think this 20-year go-around is really the wonderful thing that you are trying to do.

But I think there are other areas we need to get into along the river. A lot of them have been touched on so I won't dwell on them. I will just kind of list them. But I want to show you where they could go on an actual piece of property. Everyone else has kind of talked about philosophy, but I would like to show you an actual, very active, floodplain where you can put some of these ideas.

Here we have RiverLands, which is the environmental demonstration area. This area is under water. You saw the slide of it, all the time, and we feel this should just be a part of RiverLands.

If the property owners are willing to sell, the government should actually buy this land and make a larger environmental demonstration area of it. It is a pioneer thing for the whole country, and it is a model.

This is Highway 367 and on the other side of the highway going up river. We feel that the levee should be set back. In places the river is only a quarter of a mile apart, and some of the techniques that could be employed would be experimental techniques we could try. We need to find solutions in this country to some of these problems.

There is always the money problem, and the government can't afford to buy all the land up and down the river, but we are thinking that the floodplain easements might be a possibility that you might want to research. This would be where the government would not buy all of the property, but they would buy the floodplain rights and they would ask the farmers to relocate maybe in cluster locations on the floodplain.

Another one was the idea that the Governor of Illinois had about the transfer of set-aside acres. That wouldn't cost you anything to get that going. It would be an administrative thing, but it would help the farmers a lot if they could do this. It would be farmers paying farmers and not the government paying for this program.

And then the other idea would be to use the wetland reserve program wherever possible, but of course that is not really funded either. But it would be reforesting, increasing the forests along the rivers on both sides.

I think one of the big things that should happen in floodplains like this is that the government should not be giving all the disaster relief unless you tie that somehow to land management plans.

I think that communities ought to do their local land management plans. They ought to show you that they have some good intentions before you throw all the money at them, because then it will just happen again.

They have to somehow come up with some kind of a plan that they are going to try to do better. If the people weren't living in the floodplains, it would just be a natural occurrence, having a flood. It is people being in harm's way that causes problems. If we could do better at a local level in managing that, and if you could encourage people with some of your programs, we might do better as a Nation and not have this much damage in the floodplains.

And then I guess one of the biggest things that we would like to ask you is if you would redirect the Corps of Engineers. They have been mandated by Congress to do navigation and flood control. But they need to broaden their view. They need to have a bigger mission, a larger focus.

Sections 308 to 314 of the Water Resources Act allows them to have a broader mission. And I think if they had a broader mission, their thinking would change quite a bit. And this has to come from Congress. This is a change that the whole country could use.

I think their narrow focus and some of the problems we have are because they need to look at other solutions, especially nonstructural alternatives to flood control. And they need to have those in higher priority.

And then I go along with all the other suggestions of the Volkmer bill and Durbin's bill, and of course the relocations of all of the people out of the floodplain. And I think we have to prioritize the whole river. I don't think we can protect the whole river anymore. Somehow we have to have a plan of protecting our vital services and our transportation and not try to protect all of the farm ground up and down the river. I don't think we can do that anymore.

I guess that is all I have to say. I hope at some point you might consider us as the demonstration area for the country, because we are right in the center, and we have all the resources, and it would help everyone if we could come up with some solutions that would work.

Thank you.

Mr. APPLEGATE. That is asking a lot, to come up with solutions that work. But I appreciate you have got a lot in in terms of time, and I appreciate your testimony.

Scott Faber.

Mr. FABER. Thank you, Mr. Chairman. I appreciate the opportunity to provide testimony for you today.

My name is Scott Faber. I am Director of Floodplain Programs for American Rivers, which is a national organization dedicated to the preservation and restoration of our ancient rivers and streams.

I am providing testimony today on behalf of American Rivers and World Wildlife Fund and the Environmental Defense Fund.

Rather than go through my written statement, I just would like to make a few general comments about what we have heard today and try to tie together a lot of the ideas that have been expressed here at the table.

I think everyone is referring to this flood as something of a historic event, but perhaps, as Gilbert White indicated, the real historic event is our reaction to the flood. And when we look back years from now to see what was truly historic about this, it will be the relocation products and this new emphasis on mitigation around the country. It is our hope that that mentality will take hold in other places, not just in the Upper Mississippi River Basin.

In general, we feel that the Mississippi River has really sent us a very powerful message this summer, which is that our reliance on shortsighted engineering solutions and our land management practices have actually made matters much worse than they had to be. Instead of allowing the river to fan out and take advantage of the natural flood-control functions of the floodplains, we have sent billions of dollars to force the river into ever tighter channels, raising flood crests, and creating a false sense of security that has actually encouraged floodplain development.

Now I think is our chance to reverse those policies, to move away from structural solutions that encourage floodplain development, and to start to advocate and use nonstructural solutions.

I think there are three essential advantages. One is obvious. We are getting people and property out of harm's way.

But I think there are two other more important advantages. One is that we are reducing the long-term burden on the taxpayer. And secondly, we are restoring some of the natural functions of the floodplain. We are taking advantage of hydrology. In a sense, we are providing the Corps of Engineers and our other agencies involved with flood control with another arrow in their quiver.

Until now these agencies have only relied on engineering to solve our flood problems. Now what we are hearing today from the corps, from FEMA, from SCS, is a new willingness to find out how we can reintegrate the floodplain into our flood control efforts.

There are hundreds, possibly, of communities that are now looking for nonstructural alternatives, and we see several problems that are acting as impediments. One is that, as you have heard already, many of the monies that are available are divided among various agencies. These programs have different rules, different regulations, often conflicting.

The one example I would bring to you that really I think highlights that problem is that FEMA, when it values property, is using preflood value. HUD, however, is using post-flood value. Patently unfair, and also creating a lot of problems for communities hoping to use the community development block grant program in their relocation efforts.

Perhaps a bigger problem is that our relief is generally skewed in favor of putting people back in harm's way, and not enough in favor of moving people out of floodplain areas.

We feel that the first thing that we need to do is obviously to endorse the ideas expressed in H.R. 3012, the Volkmer bill, which

makes more money available for relocation, increases the Federal contribution. However, we think H.R. 3012 is an important first step.

What we need is more flexibility within all of our programs that are available for location. We need to make sure that all of the agencies that are involved in our relief efforts have sufficient flexibility to take advantage of nonstructural opportunities when they exist.

What little money is available for long-term flood loss reduction should be as flexible as possible, and we find that the committee should use its full jurisdiction to authorize all of these agencies to utilize any disaster appropriations they have for this flood to fund any effort that will minimize future flood damages by opening up the floodplain.

The conditions here should be that the alternative increases floodplain storage and conveyance; that the alternative will minimize long-term Federal costs under existing programs; and that the alternative is preferred by the community and individual property owners.

We believe all of these agencies, not simply FEMA, should be given enough flexibility to take advantage of these opportunities. We also feel that there are other alternatives here that aren't really fully being explored. One is simply acquisition from willing sellers. The Corps of Engineers has $69 million available for acquisition in the Missouri floodway. That is mitigation money for past bank stabilization and navigation projects. This was authorized under the Water Research Development Act of 1986.

The problem here is that the corps has taken a long time to simply make that money available. And over the last seven years they have taken the steps they needed to identify and appraise property. Then the flood came and they are telling us they have to start from ground zero to begin this process all over again.

Our concern is that there are many farmers who are anxious to get out, who will not be able to get a crop in next year, and maybe the year after that, and are willing to sell their land for this program; however, the corps is not moving fast enough to take advantage of that opportunity.

Some other options that might be explored are flood easements that are used elsewhere in the country, and elsewhere in Europe, that basically you would buy the opportunity to flood someone's land for the short term. I think it was Representative Borski who brought up the example with Valmire. In Valmire the levee was built primarily because it does indeed protect 55,000 acres of very productive agriculture, not because the town is there.

However, one possibility is, now that we are relocating the town, we could be working in concert with farmers to see if they want to have easements purchased so that we can open up that area in a way that truly takes advantage of the natural flood control functions of the floodplain.

Other options are the well reserve program and debt for nature swaps, programs that exist now that aren't being fully utilized. You have also heard about swapping of set-asides, so floodplain farmers can trade their satisfieds with upland farms. This is something

that has also been supported by many farmers but hasn't been explored fully.

I think I am glad that Mayor Nairn was here because he highlighted a problem I don't think has gotten enough attention today, and that is the lack of planning assistance right now. Mayor Nairn is a part-time mayor. Dennis Nobblock from Valmire is paid to work four hours a week. He is currently working 60 hours a week. Neither of these people have any expertise in relocation, have hardly any expertise in how Federal programs work generally. They are fishing with every piece of bait they can find. They are applying to every program willy-nilly, without regard of who is eligible, who is ineligible, how much money is available. They need assistance now.

I think the impression was created today that there are people in the field truly helping to piece together these relocation packages. I want to make certain that people realize that is not happening, that people like Mayor Nairn and Mayor Nobblock and other communities that want to relocate are not getting the coordination they desperately need. Unfortunately, we are not using our existing expertise within the Federal Government.

The Corps of Engineers has two programs designed to provide planning assistance to people like Mayor Nairn. The National Park Service Rivers and Trails Program also has people who are available to provide this kind of assistance. And really all it requires is a letter from FEMA saying, Please use your expertise to help us with these relocations. That has not happened.

And unfortunately, that could be the real wild card here. If we have people in the field who could help these small town managers, small town mayors figure out how these programs work, we could actually get many of these people out of harm's way.

A bigger problem is that no one is really in charge of our Federal flood control efforts. And we support Congressman Durbin's bill, and we support the corps' ideas today about trying to have an interagency task force run that study. We feel that whatever kind of study is taken, whatever kind of comprehensive management strategy is adopted, has to focus on the integration of all our agencies.

Mr. APPLEGATE. I would like to interrupt at this point. I have got about four minutes to get over and vote. So I am going to do that. And immediately after I am going to let you finish, and then I am going to have to go.

All of your statements will be made a part of the record. We may have some questions that we want to submit to you, so you don't have to stay. But you, if you want, Mr. Faber, will volunteer to stay for your statement. But I have to go over. So I am going to recess for about 10, 15 minutes, and I will be back.

[Recess.]

Mr. APPLEGATE. We will reconvene for whatever we have left from Mr. Faber.

Mr. FABER. Thank you. I wanted to give you or the members of the committee the opportunity to ask questions at this point. Essentially, our message to you this afternoon is that we need to be exploring these nonstructural alternatives.

Our concern is that existing programs practically compel most people to rebuild in harm's way. Of the $6 billion that will be spent

in the next few months in response to this flood, perhaps $500 million will be spent on structural alternatives that move people out of harm's way and take advantage of the flood plain.

Mr. APPLEGATE. Okay. Well, I thank you very much for staying on. I really did not have too much in the way of questions. I did for Mr. White and the Mayor who has departed, so to speak.

Mr. FABER. Mr. White is still here. I have been working closely with the Mayor so I might be able to answer some questions for you.

Mr. APPLEGATE. I wondered what his plans were for those people when there comes to be a buyout who do not want to sell, do not want to move? Do they have any contingent plans of some sort?

Mr. FABER. At this point, no. They have no power to force people to move, as you know. My understanding from my conversations with the Mayor is that most people are very anxious to leave. The problem here is this element of time.

As the days and weeks go on, many people now are starting to rebuild right on the river. There is no levee at Grafton. You can just walk into it.

Nevertheless, people are getting signals from the Federal or the State government that there will not be a relocation project in Grafton despite the Mayor's efforts. So they are hanging in limbo. They need some quick answers and the Mayor is spending about half of his time in a public relations blitz to assure people they are going to be able to move ahead with some kind of relocation project. In reality, I am not sure how certain that project is.

Mr. APPLEGATE. Mr. White, you noted the historic opportunity you mentioned to move toward flood plains management other than the statutory changes we discussed earlier. Do you have any specific changes that we can make during this window of opportunity to advance flood plain management?

Mr. WHITE. Yes.

Mr. APPLEGATE. Could I please have your view on Durbin and Volkmer?

Mr. WHITE. We need to remember that successful ventures in that direction very often don't get much publicity. As you know, if part of the golden triangle of Pittsburgh reduces damage levels for certain heights of water, that doesn't get much publicity because it works. There are a good many areas such as Soldiers Grove, Wisconsin, or Tulsa, Oklahoma, that have been quite effective over a period of time in dealing with reduction of flood hazards. That doesn't make the headlines.

It is very hard for other communities to move in the same direction oftentimes without a good deal of professional help. In the post-disaster period such as we have seen in the Midwest, there are many communities that are not able to get that help. They don't know for example, that the National Park Service could, if ordered, give them a good deal of assistance in developing recreational use of their flood plains which in some parts of the country has been very effective.

If some of the Mayor of Grafton's constituency have difficulty in going along with a buyout proposal, part of the reason is they don't know what the other alternatives are for them and he has trouble finding out what it is and being able to tell them about it.

While in theory, on the books we have a comprehensive approach from the Federal agencies, to dealing with readjustments in the use of flood plains ranging all the way from constructing projects to changing the design of things and changing the effectiveness of the operation of a new plant the Federal Government has helped subsidize. In practice, it is very difficult for many of the communities to come to terms with it. This is also true of farmers. Farmers don't know about the range or kind of easements or cooperative arrangements that can be worked out or the possibility of having levee protection which only protects to a restricted level.

Right now we are in a position where many of the Federal agencies have capacities that are not really being mobilized and they are not being made available to State agencies, and State agencies are getting very little encouragement and support in performing a function which is so essential for the local decision-making.

So from that standpoint it is a very exciting time. There is the possibility of mobilizing resources which in theory are there.

Mr. APPLEGATE. I thank you for that. We do have, as you say, a wonderful opportunity to be able to accomplish something that over a long period of time could be extremely helpful. We hope to do that not only with this but when we move out of what we are doing here then we are moving into the clean water area and we will be working on that during the course of next year. So it is very, very important.

Mr. WHITE. It fits into the whole Clean Water Act.

Mr. APPLEGATE. It is all interrelated, right.

Mr. WHITE. I think the kind of testimony you had this morning from the Army, FEMA, and Agriculture coming together, and as harmonious as it was, is just unprecedented.

Mr. APPLEGATE. It is. I would say the Administration could very well be congratulated for the direction that they have taken in bringing that about so that these agencies can work together instead of being at each other's throats. You are not going to get anything done if everybody goes on in different directions.

So I think that we have, as you mentioned, we have a wonderful start just from what we have heard today. This has been a day-long experience of wonderful testimony. It will play very important in our role of what we have to do particularly in the next few days and then on to the next few months.

I think that is it, since there is nobody else around. I want to thank you again very, very much for being here.

[Whereupon, at 3:15 p.m., the subcommittee was adjourned.]

PREPARED STATEMENTS SUBMITTED BY WITNESSES

Statement of
Galen Bridge
Acting Chief, Soil Conservation Service
United States Department of Agriculture

before the
Subcommittee on Water Resources and Environment
Committee on Public Works and Transportation
United States House of Representatives

Concerning
Federal Flood Control and Flood Plain Policy
October 27, 1993
Washington, D.C.

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for the opportunity to discuss with you this summer's flooding of the upper Mississippi River and its tributaries. The Flood of 1993 will go into the records book as being one of the most devastating natural catastrophes ever to strike North America. Millions of acres of prime agricultural land have flooded, thousands of people have had their homes inundated with water, and millions of acres in the upper watersheds have been severely eroded. This damage is due to the high intensity storms which continued well into this summer and flood plain management practices that kept the rivers at flood stage for record periods of time.

I also appreciate the opportunity to talk about flood plain policy in general and the need for changing Federal flood plain management policy.

First, let me give you an update on the impact of the flood and the efforts this administration has made and is making in responding to this historic flood. This flooding, concentrated in nine Midwestern states, is the worst in American history:

- At least 48 lives were lost.
- Preliminary damage estimates, ranging up to $20 billion, make this the costliest flood of this century.
- More than 54,000 individuals were evacuated from their homes.
- At least 50,000 homes were destroyed or damaged.
- Seventy-seven small towns located in flood plain areas were completely flooded.
- Nearly half a million individuals were left without potable running water.
- Both corn (7.0 billion bu.) and soybean (1.9 billion bu.) production will be the lowest since 1988; dropping 27% and 14%, respectively, from 1992.
- Nearly 8 million acres of crops, an area more than twice the size of Connecticut, were not planted or were lost after planting due to flooding or excessive rains.

Despite the widespread crop losses, there has been virtually no impact on food prices. USDA pre-flood forecasts for the Consumer Price Index for all food called for an increase of 2-3 percent in 1993. It now looks like the increase will be close to 2 percent.

The damages to agriculture have been particularly devastating. While the immediate direct damage caused by the flood is tremendous, there are numerous other areas where damages have occurred. Damages to terraces, diversions, and waterways on highly erodible lands and the extensive amount of erosion on the remaining unprotected lands are being addressed. Farmers with highly erodible lands face the problem of repairing and

performing maintenance on existing structures; cleaning sediment and debris from existing terraces, waterways, drainage ditches and canals; and building new erosion control practices as scheduled in their Food Security Act plans. The impacts of the flood and the unprecedented wet soil conditions will affect farmers' ability to comply with the Food Security Act requirements and will challenge our ability to provide needed assistance.

In the flooded areas, farmers will be addressing the clean-up of debris, deposition of silt and sand from the breeches in the levees, and deciding what to do with the large scour areas. USDA is responding to the issue of restoring the productivity of agricultural lands in unprecedented ways. The Emergency Supplemental Appropriations for Relief from the Major Widespread Flooding in the Midwest Act of 1993 (Public Law 103-75) authorized the use of funds otherwise available for waterway and watershed repair, including repair to dikes and levees, to convert what was once cropland to wetlands.

This authority, with funds appropriated under the Emergency Watershed Protection Program (EWP), will allow the Secretary of Agriculture to purchase wetland conservation easements from persons owning cropland damaged by the 1993 Midwest floods. To be eligible, the land must have the potential for restoration to wetland conditions and the owners must agree to restore and maintain those conditions.

In the Emergency Supplemental Act, Congress authorized up to $60 million for the EWP program. Rulemaking for the emergency wetland reserve portion is underway and we expect to announce the program soon. In addition to reducing cropland damages from future flooding , these restored

wetlands will provide wildlife habitat, water quality improvement, flood water retention, floodway enhancement, groundwater recharge, open space, aesthetic value, and environmental education opportunities.

Now let me turn to what I believe is an opportunity for this administration and the Congress to resolve the broader policy concerns of Federal flood control and flood plain policy.

USDA was engaged in water resources management studies before the close of the 19th century. With the establishment of the Soil Conservation Service in 1935 and enactment of the Flood Control Act of 1936, USDA water resources programs were enlarged significantly. The Flood Control Act of 1944 and the Watershed Protection and Flood Prevention Act of 1954 added new responsibilities and programs for water resources planning and construction of works of improvement.

It is the Watershed Protection and Flood Control Act of 1954 (Public Law 83-566), administered by the Soil Conservation Service (SCS), that USDA now uses to help local organizations plan and carry out works of improvement for flood management, agricultural water use, and conservation on watersheds smaller than 250,000 acres in size.

This assistance includes conducting investigations and surveys, developing a watershed protection plan, developing an engineering plan for structural measures, determining the economic feasibility of the proposed plan, entering into agreements with local organizations for installation of planned works of improvement, planning for operation and maintenance, and

providing financial and other assistance to the sponsoring local organizations. Under section 6 of this act, the Department also carries out River Basin and Flood Plain Management studies.

I might add at this point that structures built under the Public Law 83-566 program functioned as designed during this historic flooding period; preventing millions of dollars of damages from occurring to communities and to thousands of acres of farmland in the upstream reaches of the Mississippi and Missouri Rivers. We are very proud of the way the local watershed sponsors maintained these structures and in the way the structures functioned.

However, even with the works of improvement installed by SCS in small upstream watersheds and those installed by the Corps of Engineers on the larger rivers, studies continue to show that flood damages rise year after year. Basically, this is because the natural flooding has been restricted and people continue to live and work on flood plains for many reasons, including various financial and other incentives.

While Federal agencies have been authorized to assist communities in evaluating flood hazards and in developing alternative methods of reducing damages -- such as flood plain zoning, building codes, subdivision regulations, flood proofing, and warning systems -- these methods are rarely selected because the financial provisions for most Federal participation has favored control measures such as dams and levees.

This is true for the Public Law 83-566 program where 100 percent of the cost for flood prevention is provided by the Federal government while cost share for flood-warning systems or other solutions are at a lower rate or not cost shared at all. Other opportunities for individuals to use flood plains for recreational, agricultural, and wildlife uses often are neglected. When given the option, communities will choose the alternative that costs them the least. Alternatives to structural measures of flood control rarely are selected, despite the fact that dams and levees can never guarantee complete protection as amply demonstrated this past summer. Therefore, it is important that we add incentives to encourage the use of non-structural measures.

We must recognize, however, that for most of this century, the National priority of economic growth was the driving force to justify full development of our water resources as long as the direct economic benefits could be shown to exceed the economic costs. In more recent years objectives have significantly broadened and social and environmental values -- such as wetland preservation and restoration, aesthetics, and the quality of air, water, and land -- are recognized as important, as well as having economic value. Federal programs need to give these values more weight.

In addition, recognizing that land use decisions are appropriately a local responsibility, people should be discouraged from locating on flood plains. To reduce flood losses, Federal, State and local incentives should be provided to adopt alternatives, other than structural measures. For example, the benefits from future growth and development should not be considered as a benefit when evaluating P.L. 83-566 and Corps flood prevention projects in a flood plain.

From the Congress, we have seen increasing recognition of the value of alternative uses of the flood plain and the value of preserving open flood plain space. In 1990, Public Law 83-566 was amended to allow the Secretary to provide cost-share assistance to project sponsors to enable them to acquire perpetual wetland or flood plain conservation easements to perpetuate, restore, and enhance the natural capability of wetlands and flood plains to retain excessive floodwaters, improve water quality and quantity, and provide habitat for fish and wildlife. The local cost share for this option may be up to 50 percent. The Federal cost share for structural solutions remained at 100 percent even though an attempt was made to change the language to read "up to 100 percent." This change would have permitted the Federal government to offer alternatives on a more financially competitive basis, thus elevating the chances of other alternatives being selected, and we urge such a change to be enacted at the earliest possible time.

I also should mention that the flood plain management studies conducted under our River Basin Program are being broadened beyond the traditional stream hydrology and hydraulics analysis to include studying the natural values and benefits of the natural stream systems.

USDA is adopting an ecosystem approach as a means of addressing the interactions among natural resources--soil, water, air, plants, and animals--and human considerations. Programs managed by the Forest Service and SCS will now be delivered through ecosystem based technical assistance which will give greater consideration to our Nation's natural values.

With respect to flood plain policy, we believe that the importance and value of the natural and ecological functions associated with flood plains are becoming widely recognized. During the 1980's many Federal agencies working together prepared "A Unified National Program for Flood Plain Management."

More recently, the Federal Interagency Flood Plain Management Task Force prepared an update titled "Flood Plain Management in the United States; An Assessment Report" dated 1992. We believe that this document and its recommendations should be the starting point for any policy revisions and evaluations of Federal programs that respond to flood control and flood plain policy in general. The Assessment Report provides a state of the art analysis of the current status of the Nation's management of the flood plains. It identifies the strengths and weaknesses of available data needed to make sound policy judgements. It also suggests areas for improvements and provides considerations for changes in policy and procedure.

We would agree that restoring and preserving the natural and cultural resources of flood plains is a high priority policy issue for this Nation. The Assessment Report suggests that stronger Federal support of programs to set aside flood plains from development is needed and that Federal policies and procedures do not discourage, or even obstruct, innovative approaches to preserving natural flood plains. As I mentioned earlier, we are trying to respond to this need through changes in the Public Law 83-566 program but more needs to be done.

As mentioned by Dr. Witt in his testimony, the Administration is developing an interagency, comprehensive review of Federal policies and programs relating to flood plain management. The review goal would be to develop recommendations that will lead to socially desirable and ecologically sensible *unified* policies that provide flexibility at the local level where decisions need to be made.

We believe that with clearly defined Federal policy will come the understanding that landscape functions must be considered in a broader fashion than in the past. The lessons of the disastrous Midwestern floods should not have to be relearned by succeeding generations.

The Department stands ready to work with this subcommittee on these issues. I appreciate the opportunity to testify today and will be happy to respond to your questions.

PAT DANNER
8TH DISTRICT MISSOURI

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SUBCOMMITTEES
SURFACE TRANSPORTATION
AVIATION
ECONOMIC DEVELOPMENT

COMMITTEE ON SMALL BUSINESS
SUBCOMMITTEE
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Opening Statement of Congresswoman Pat Danner
Water Resources Subcommittee Hearing
October 27, 1993

THANK YOU MR. CHAIRMAN, FOR THE OPPORTUNITY TO TESTIFY BEFORE THE WATER RESOURCES SUBCOMMITTEE.

THE 6TH DISTRICT OF MISSOURI HAS BEEN SEVERELY DAMAGED BY THE FLOOD OF 1993. MY DISTRICT IS BOUND ON THE WEST AND THE SOUTH BY THE MISSOURI RIVER. IN ADDITION, THERE ARE MANY TRIBUTARIES -- THUS, ALL 27 COUNTIES IN MY DISTRICT WERE DECLARED NATIONAL DISASTER AREAS. MY CONSTITUENTS AND I HAVE SEEN, FIRST-HAND, THE DEVASTATION CAUSED BY THIS FLOOD.

WE HAVE ALSO SEEN MANY OF THE EFFECTS OF THE FLOOD THAT NEWS NETWORKS DID NOT SHOW - THE SIX TO TEN FEET OF SAND WHICH NOW STANDS ON THE MOST FERTILE AGRICULTURAL LAND IN THE UNITED STATES; THE 20 FOOT HOLES, OVER 6 FEET DEEP, WHICH EXTEND ACROSS LEVEES; THE MILES OF TERRACES, IN MY DISTRICT ALONE, WHICH WERE WASHED AWAY BY THE TORRENTIAL RAINFALL; AND THE 1.5 MILLION ACRES OF CROPS WHICH WERE NOT HARVESTED.

HOWEVER THE ADVERSE AFFECTS OF THE FLOOD DO NOT IMPACT ONLY FARMLAND. THE LEVEE PROTECTING THE MOST INDUSTRIALIZED AREA IN MY DISTRICT IN NORTH KANSAS CITY WAS DAMAGED AND, UNDER CURRENT POLICY, WILL NOT BE REPAIRED BY FEDERAL PROGRAMS. IN ONE OF MY COMMUNITIES 140 BUSINESSES WERE SEVERELY IMPACTED. WATER TREATMENT PLANTS AND SEWER TREATMENT PLANTS IN MANY OF MY COMMUNITIES - AS WELL AS MANY OTHER ENTITIES - ARE ALSO AFFECTED BY DAMAGED LEVEES WHICH ARE NOT ELIGIBLE FOR ASSISTANCE.

PRINTED ON RECYCLED PAPER

THESE EFFECTS OF THE FLOOD HAVE HAD A DEVASTATING IMPACT ON THE ECONOMY OF MY DISTRICT AND OF MISSOURI. THE FOOD AND AGRICULTURAL POLICY RESEARCH INSTITUTE ESTIMATES THAT THE CROP LOSSES IN MISSOURI TOTAL APPROXIMATELY $247 MILLION DOLLARS. IN ADDITION, IT IS ESTIMATED THAT THERE WILL BE IN EXCESS OF A $500 MILLION DOLLAR REDUCTION TO MISSOURI'S ECONOMY AND THE LOSS OF 7,000 JOBS.

ALTHOUGH MY DISTRICT HAS EXPERIENCED ALL THESE THINGS, THAT WHICH HAS MOST SEVERELY AFFECTED MY CONSTITUENTS HAS BEEN THE RECENT POLICY, OR SHALL I SAY, LACK OF POLICY WITH REGARD TO THE REHABILITATION OF THE LAND DAMAGED BY THE FLOOD. IN MY EXPERIENCE WITH THE VARIOUS AGENCIES AND IN THE EXPERIENCE OF MOST CONSTITUENTS, VERY LITTLE ASSISTANCE IS AVAILABLE FOR PUTTING BACK TOGETHER THE MOST IMPORTANT PIECE OF THEIR LIVES, THE LAND OR PROPERTY ON WHICH THEY DEPEND.

ALTHOUGH THE NEWS REPORTS ABOUND ABOUT ALL THE OPPORTUNITIES AFFECTED INDIVIDUALS AND COMMUNITIES HAVE FOR REMOVING SAND AND DEBRIS, FOR PARTICIPATING IN FEDERAL BUY-OUT PROGRAMS OR FOR REPAIRING DAMAGED LEVEES, WE HAVE FOUND THAT THESE PROGRAMS ARE EITHER INSUFFICIENT OR ENMESHED IN RED-TAPE AND THEREFORE INACCESSIBLE. WITH REGARD TO BUY-OUT PROGRAMS, THE RED-TAPE AND INCOMPATIBILITY OF THE VARIOUS FEDERAL AGENCY REGULATIONS HAVE PREVENTED ANY OF THE INTERESTED COMMUNITIES IN MY DISTRICT FROM TAKING ADVANTAGE OF THIS PROGRAM. IT IS JUST NOT POSSIBLE FOR A SMALL COMMUNITIES TO COME-UP WITH THE MATCHING FUNDS NECESSARY TO PARTICIPATE IN THE BUY-OUT PROGRAM.

WITH REGARD TO LEVEE REPAIR, I HAVE FOUND THAT THE CORPS OF ENGINEERS HAS A POLICY OF REPAIRING LEVEES THAT HAVE THE PROPER PAPERWORK FILED RATHER THAN CONSIDERING THE QUALITY OF THE LEVEE OR THE NUMBER OF ACRES, BUSINESSES, HOMES AND INDIVIDUALS PROTECTED BY THE LEVEE. IN MY DISTRICT THERE ARE HIGH QUALITY, WELL ENGINEERED AND WELL MAINTAINED LEVEES WHICH, BECAUSE THE PROPER PAPERWORK WAS NOT FILED PRIOR TO THE FLOOD, ARE NOT ELIGIBLE FOR ASSISTANCE.

IF THIS LAND IS NOT RECOVERED, THE IMPACT ON THE ECONOMY WILL BE DEVASTATING. IT IS ESTIMATED THAT THE VALUE OF THE ANNUAL CROP PRODUCTION IN THE AFFECTED AREAS IS $96.2 MILLION DOLLARS. THIS LOSS IN CROP PRODUCTION WILL RESULT IN A TOTAL INDUSTRY OUTPUT REDUCTION IN MISSOURI OF $208 MILLION DOLLARS AND A LOSS OF 3,327 JOBS. IN ADDITION, TO THE LOST INCOME AND LOST JOBS, THIS TRANSLATES INTO LOST TAXES. BY REDUCING THE ASSESSED VALUE OF THE LAND, THE PROPERTY TAX COLLECTIONS WILL DECREASE BY $2.4 MILLION.

THE EXPERIENCES IN MY DISTRICT IN THE AFTERMATH OF THE FLOOD HIGHLIGHT THE NEED FOR A COMPREHENSIVE RIVER MANAGEMENT POLICY. THE FIRST STEP IN DEVELOPING THIS POLICY IS REDUCING THE RED TAPE WHICH PREVENTS COMMUNITIES FROM ACCESSING THE PROGRAMS INTENDED TO ASSIST THEM. ONE OPTION IS RELAXING THE UNIFORM RELOCATION ACT. IN MY EXPERIENCE, THIS ACT PLACES UNDUE BURDENS UPON THE BUY-OUT PROCESS AND DISCOURAGES USE OF THE PROGRAM. IN ADDITION, BECAUSE EACH STATE IS DIFFERENT, EACH STATE SHOULD BE GIVEN A STRONG VOICE IN THE DEVELOPMENT OF A RIVER MANAGEMENT POLICY. WHILE I REALIZE THAT THE RIVER DOES NOT RECOGNIZE STATE BOUNDARIES AND WHAT IS DONE UPSTREAM AFFECTS WHAT OCCURS DOWN STREAM, POLICIES SUCH AS THIS MUST HAVE THE INPUT OF LOCAL INDIVIDUALS AND NOT BE LEFT TO THE PEOPLE IN WASHINGTON.

MR. CHAIRMAN, AGAIN, THANK YOU FOR THE OPPORTUNITY TO TESTIFY TODAY. ALTHOUGH THE EXPERIENCE OF CLEANING UP AFTER THE FLOOD IS A LONG AND TRYING ONE, I THINK THAT IT HAS BEEN A VALUABLE LEARNING, EXPERIENCE REGRETTABLE THOUGH IT IS, WHICH WE SHOULD USE TO WORK TOGETHER IN ORDER TO DEVELOP A WORKABLE POLICY.

DEPARTMENT OF THE ARMY

OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY

(CIVIL WORKS)

COMPLETE STATEMENT

OF

DR. G. EDWARD DICKEY

ACTING ASSISTANT SECRETARY

BEFORE THE SUBCOMMITTEE

ON

WATER RESOURCES AND ENVIRONMENT

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

U. S. HOUSE OF REPRESENTATIVES

FLOOD CONTROL AND FLOODPLAIN POLICY

OCTOBER 27, 1993

Mr. Chairman and members of the Committee, I am pleased to be here to discuss the flood of 1993, to address the potential floodplain management policy considerations which may be derived from the experience, and to provide our observations on H. R. 2931. Accompanying me today is Lieutenant General Arthur E. Williams, the Chief of Engineers of the Army Corps of Engineers. We appreciate the opportunity to participate in these discussions and hope that by working together we can forge an explicit set of policies which will guide Federal efforts in floodplain management.

The flooding of 1993 in the Upper Mississippi and Lower Missouri River basins was among the most devastating in the history of the Nation. It ranks among the events of 1917 in California, of 1927 in the Lower Mississippi, and of 1936 in the Northeast and Ohio River. Each of these events prompted major changes in Federal legislation and floodplain policy. This event may be no exception. The flood of 1993 had its origin in the Spring with extensive rainfall which covered a large part of the Upper Midwest. The ground became saturated. Record rainfalls over the ensuing months overtaxed existing flood control facilities and in some cases exceeded flood fighting capabilities. Depending on the location within the Upper Mississippi or Lower Missouri River Basins, the flooding is estimated to have anywhere from a one in one hundred year to one in five hundred year chance of occurring. I have included a more detailed description of the flooding event as an appendix to this testimony.

The magnitude of the event has raised serious concerns about this country's ability to provide adequate flood protection and to respond quickly and effectively during post-flood recovery. Perhaps most significantly, it has caused us to reconsider the best long term strategy, not only to prevent a recurrence of the 1993 experience, but to ensure that the natural and economic values of the floodplain are used to the fullest extent possible in ways that reflect current environmental as well as economic values.

Since July, we have heard from many people who have presented a wide range of perspectives. To some, economic development and the construction of levees and other flood control structures in the floodplain have put more people "in harm's way" and by restricting the river's flow, increased the likely level of destruction during flooding. Others have stressed the need to improve our analytical procedures to ensure a full accounting of costs and environmental and economic benefits and opportunities foregone before the structures are built or repaired. Of course, the needs of those citizens whose lives and livelihoods have been disrupted and who face the possibility of future losses this spring or summer should they remain in the floodplain have been clearly and compellingly articulated.

These diverse and sometimes conflicting points of view make it very difficult to obtain consensus on the issues of flood control and floodplain policy. Nonetheless, such an effort is in the national interest and a study such as that proposed in H.R. 2931, would be a major contributor to this effort. As I shall explain later, the proposed study could be productively expanded to address a broader variety of issues.

Our goal in the immediate aftermath of the flood has been to assure that our short term responses are consistent with longer term objectives. The Army Corps of Engineers received $120 million in the 1993 Emergency Supplemental Appropriations bill for repair of levees under Public Law 84-99, with an additional $60 million available as a contingency. We have worked hard to begin repairs on eligible levees, especially in situations where there is an immediate threat to life or property.

At the same time, we have been working with other Federal agencies engaged in the disaster response and as part of an Interagency Task Force, chaired by the White House, to provide a fully coordinated Federal response and to develop alternatives to the traditional approach of replacement in kind of damaged structures. Our policy is that as applications for assistance are received, the information is shared with field representatives of other agencies. These representatives, through communication with the local sponsor, assess the possible use of other programs, such as the Department of Agriculture's Wetlands Reserve Program, as an alternative to levee repair. Once the Corps completes its repair evaluation-- at least a two week process-- other agencies have an additional 24 hours to complete their presentation of alternatives. If the Corps analysis indicates that a levee is eligible for repair, the local sponsor may choose to delay repairs in order to be able to evaluate fully a proposed alternative, or to begin implementation of the alternative.

Although no alternatives to levee repair have been selected so far, I believe this procedure is far from a "business as usual" approach. It has strengthened the working relationships among Federal agencies and heightened the awareness of the need to take the broadest possible view of post-flood restoration. As part of this response, the Interagency Task Force has compiled a list of alternative programs, including funding levels and procedures for applying or otherwise becoming eligible for these programs. The Task Force also intends to undertake an intensive review, with substantial public input, to look at various policy options to guide decision-makers in the Administration and Congress in forging any appropriate changes to current floodplain management policies and programs.

The initial interagency review, targeted for April, 1994, has as its goal the identification of the major options available for overall improvements in Federal activities and programs relating to

floodplain management in the Upper Mississippi River Basin. We have several basic objectives in fashioning an effective Federal role: to reduce risks of flooding through improved management of the hydrology of the basin; to reduce the risks of damage to life and property when flooding occurs; and to restore the natural ecological functions and values of the greater Mississippi River basin.

Given these objectives, we need to ensure that our many Federal programs affecting activities in the floodplain are compatible and well-coordinated; that they are properly integrated with the activities of state and local governments; and that they make the most of scarce dollars at every level of government.

This review is, however, only the initial step and, as such, will identify what additional studies may need to be performed for a full analysis of opportunities and impacts. Clearly, a six month study does not allow sufficient time to collect and evaluate technical data from the flood. Basin wide system evaluations of floodplain management alternatives require a comprehensive approach as H.R. 2931 anticipates. In considering our long term objectives, I believe there are certain principles that should be retained:

< A new look at the river is needed not only because of the flood, but also because of rapidly changing social preferences for the use of the river floodplains and wetlands. It is these changes in preferences and economic considerations, more than the flood, which must guide long term action; yet it is the flood which provides the necessary catalyst to reevaluate the Nation's floodplain management practices.

< Flood damage reduction is an important objective of floodplain management, but it is not the only objective. There is substantial disagreement as to whether or not reducing the number of levees would increase or decrease the overall level of flood protection. Restoration of wetlands and other alternatives to traditional structural flood control measures produce environmental benefits that have significant national value that extend beyond the protection they can provide.

< The economic value of the upper Mississippi/ Missouri as it is currently used is not trivial. These rivers and tributaries and contiguous lands are an important national asset that is currently being utilized by a wide variety of economic and environmental interests. When changes to this usage pattern are recommended, they will have potentially significant impacts on existing users. The economic losses as well as the gains associated with changes in floodplain management must be carefully evaluated.

- < The major flood of 1993 should not cause us to focus only on such events. We must also understand the consequences of changes in floodplain management when more frequent events of a smaller magnitude occur.

- < The Federal Government cannot and should not solve these problems by itself. State and local governments and private sector interests must be fully engaged in the reevaluation of floodplain management.

- < The study must recognize the limitation of resources, not only for private citizens, but for government at all levels. It may become necessary to ask those who choose to live and work in the floodplain to accept a greater share of the risk of their actions.

- < We should make every effort to take advantage of data and ideas that are already available. One such example is the 1992 report of the Federal Interagency Floodplain Management Task Force titled, "Floodplain Management in the United States: An Assessment Report".

- < Two important goals of this reevaluation should be greater consistency among Federal agencies in their flood related activities (before, during, and after the event) and more flexibility within and among Federal programs in order to respond to flood events in ways that meet the test of common sense.

My comments on the proposed study envisioned by H.R. 2931 are based on these principles.

As I indicated to Chairman Mineta in my letter of October 20, 1993, I believe that the study may be too narrowly defined by identifying a limited set of objectives which focus primarily on structural flood control measures and may not necessarily reflect the full range of activities, interests and opportunities that exist within the basin. In addition, there are other restrictions on the study which may limit the study scope. I am especially concerned that the term "critical or high priority public facilities" is undefined and that the study would direct the Corps of Engineers to make recommendations that could infringe upon the responsibilities of other Federal and state agencies, for example, the identification of facilities that pose a threat to public health and safety.

Although the completion date has been changed from the 180 days contained in a virtually identical amendment to Senate Bill S.1298 to January 1, 1995, we still do not feel that the revised date would allow us to complete the kind of comprehensive study which would be fully responsive to congressional concerns as reflected in the study contents contained in Section 2(b).

We would propose as an alternative that Congress authorize and fund reconnaissance studies of the reaches of the Upper Mississippi and Lower Missouri Rivers as described in the Conference Report accompanying the 1994 Energy and Water Development Appropriations Bill. The reconnaissance studies would take roughly 18 months to complete. This would allow time for full public input, establish the base conditions needed for a full assessment of the economic and environmental cost and benefits associated with flood damage reduction projects and changes in land use patterns, enumerate the resources necessary to develop comprehensive solutions for improved long-term floodplain management, and identify potentially productive feasibility studies of specific projects or programs that could improve flood protection capabilities.

Congressional support for this approach would be most clearly articulated if, in addition to the funding contained in the Fiscal Year 1994 Energy and Water Development Appropriations Bill, separate action was taken which gave the Army specific authorization to carry out such studies. Because of the complicated nature of the Federal roles within the floodplain, we also believe it is important that any comprehensive review of floodplain management issues be undertaken as a broad interagency effort. While the Army is clearly deeply involved in these issues, other Federal agencies have equally important roles. Therefore, we recommend that the Committee recognize that the Army's review is part of a larger interagency effort directed by and for the President.

I recognize that today's hearing is focused on post flood recovery and long range policies of floodplain management. Nonetheless, I would like to take the opportunity to recognize the heroic efforts of local communities and citizens, the states, National Guard units, and all of the Federal agencies that participated in the flood fighting activities this summer. The Army Corps of Engineers was an integral part of this effort and I am proud to be associated with the dedicated people, both military and civilian, of the Corps of Engineers.

A P P E N D I X
Flood of 1993

The Flood of 1993 was a very significant event. The precursor meteorological conditions were occurring long before the flooding actually began in June. Above normal precipitation occurred through most of the upper Midwest, eastern Great Plains and Mississippi Valley since at least the beginning of the growing season (April 1), and dates back ten months at some locations. The rainfall through May saturated the ground and raised the levels of rivers and reservoirs in the region. When the persistent storms came in June and July, the intense rain rapidly ran off into the already swollen streams and rivers thereby causing them to rise above the channel banks and onto adjacent flood plains or against the flood control structures.

The heavy rainfall first occurred over the uppermost portion of the Mississippi River basin in Minnesota during early June. By July the rain center had moved down over Iowa and in August it generally centered over Missouri. Before the heavy rains subsided in September, a total of nine states experienced major or record flooding along their rivers and streams.

The flooding, which has exceeded all previous record levels at many locations, occurred along the upper and middle reaches of the Mississippi River and its tributaries, of which some of the major ones are: the Minnesota, the Iowa, the Des Moines, the Illinois and the Missouri Rivers. New record high water levels (stages) were established on the Mississippi River from Davenport, Iowa, to Chester, Illinois, (just above its confluence with the Ohio River) and on the Missouri River from St. Joseph, Missouri, to its mouth at St. Louis.

Extensive damage occurred to farmlands, as agricultural levees either overtopped or breached, and to urban areas that lacked formal flood protection facilities. The entire upper and middle reaches of the Mississippi River and the major portion of the navigable reach of the Missouri River were either closed to commercial navigation or restricted to limited navigation for weeks. Corps flood control reservoirs were filled to record capacities, many reaching levels several feet above their spillway crests; but all remained effective throughout the flood.

The flood was very large in magnitude and rare in nature. At St. Louis, the chance of occurrence of the peak flow is estimated to be between one in one hundred and one in one hundred twenty-five (100-year to 125 year frequency); at locations in the upper Mississippi River its probability is estimated to be only one in five hundred (500-year frequency). Not only was this flood characterized by its record peak levels but also by its sheer volume and duration. The volume of runoff produced by the incessant and protracted rainfall dwarfed that produced by the

previous record flood in 1973. At St. Louis, the Mississippi River remained above flood stage for more than three months and, at Hannibal, Missouri, the duration was even longer.

RICHARD J. DURBIN
20TH DISTRICT, ILLINOIS

AT-LARGE WHIP

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TESTIMONY OF

THE HONORABLE RICHARD J. DURBIN

BEFORE THE

SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

OCTOBER 27, 1993

Mr. Chairman, I would like to thank you for holding this very important hearing today and for allowing me this opportunity to testify on behalf of my proposed legislation (H.R. 2931) to authorize the U.S. Army Corps of Engineers to conduct a comprehensive flood control study of the Upper Mississippi River and its tributaries.

This year's record flooding in the Midwest has made 1993 a year that will never be forgotten. For hundreds of thousands of residents of river towns such as Hull, Pleasant Hill, Hardin and Grafton, Illinois, their lives may never be the same. Torrential rains in the spring and early summer caused the Mississippi River to swell, reaching record levels and devastating much of the Midwest.

The one thing about this summer's tragic flooding which I will never forget was the widespread effort by people from near and far to fight the rising tide. Thousands of people from senior citizens to Boy Scout troops worked tirelesaly hour after hour filling and stacking sandbags in an effort to save homes and valuable farmland. One steamy July afternoon on a sandbag line near Eldred, Illinois, with volunteers from across the state, I realized the special cooperation and sense of community which was shared by these strangers who were standing side by side in an effort to outpace the river.

Despite the best efforts of all of the volunteers, many levees did not hold. Water spilled over breached levees wreaking havoc on homes, businesses and farms in Illinois and across the Midwest.

With cleanup and rebuilding now underway, it is vital that we start thinking about how we can prevent damage of this magnitude in the future. It is important that we take away from this devastating flood of 1993 the knowledge needed to improve future flood control efforts.

Fourteen of my colleagues, Democratic and Republican, from flood ravaged areas, have joined me in introducing H.R. 2931 to help improve flood protection on the Upper Mississippi River and its tributaries to protect public health, maintain commerce, and reduce economic losses.

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The bill requires the U.S. Army Corps of Engineers to assess the adequacy of current flood control projects, both federal and nonfederal, on the Upper Mississippi River and recommend improvements to protect high-priority public facilities and to prevent economic losses and the release of hazardous materials into flood waters. The Corps would be required to report its findings to Congress by January 1, 1995.

This study would answer some of the questions which we were left with after this year's flood. For example, as we begin to think about rebuilding, we must decide if it would be appropriate to require the federal government to protect the approaches to bridges such as the Bayview Bridge in Quincy, Illinois which flooded and closed the only bridge over the Mississippi for 250 miles. And, would it be cost-effective to enhance protection of certain critical levees like the Nutwood levee east of Hardin, Illinois which failed, flooding 14,000 acres of farmland and isolating Calhoun County by closing the only bridge into the county?

The Corps would also examine ways to ensure that hazardous and other industrial wastes do not threaten the health and safety of local residents or the environment. In addition, the study would look at the impact the current system of levees and flood control projects had on the flood levels experienced on the Upper Mississippi in 1993 and the cost-effectiveness of alternative flood control measures such as the preservation and restoration of wetlands. Furthermore, the environmental impact of current flood control measures and proposed improvements would be evaluated.

The bill also directs the Corps to examine the differences between federal funding for construction and maintenance of flood control projects on the Upper and Lower Mississippi River systems. Since 1927 the federal government has spent almost $6 billion to build and maintain levees south of Cairo, Illinois, while flood control efforts north of Cairo require a greater level of local funding for construction and maintenance. In short, the Upper and Lower Mississippi River systems are treated like two different rivers.

We need to look at the reasons for this apparent inequality in federal spending on flood control on the Upper and Lower Mississippi. While the federal budget deficit will prohibit a federal funding commitment like the one which was made after the 1927 flood, federal funds should be targeted carefully to give residents of the Upper Mississippi some of the same peace of mind residents along the Lower Mississippi have enjoyed for over sixty years.

As we sort through all of the issues left in the flood's wake and decide how to proceed with future flood control efforts, we must prioritize. The federal government cannot afford to come to the rescue of the same people and businesses year after year. A line must be drawn somewhere. This study would help us decide where that line should be drawn and how we can target our limited federal dollars, in the fairest way possible, for infrastructure in greatest need of protection such as bridges, water and sewer plants and other structures important to local economies and jobs in our area.

Mr. Chairman, I would again like to thank you for this opportunity to testify before your subcommittee. I hope you will markup H.R. 2931 in the near future and send it to the full committee and then the House floor as soon as possible. I would also like to ask permission to submit a summary of my bill, H.R. 2931, for the record.

SUMMARY OF BILL TO REQUIRE CORPS FLOOD CONTROL STUDY

The U.S. Army Corps of Engineers shall conduct a study to assess the adequacy of current flood control measures on the Upper Mississippi River and its tributaries and will:

* Identify critical water and sewer, transportation, and other essential public facilities which currently do not have adequate flood protection.

* Identify high priority industrial, petrochemical, hazardous waste, and other facilities which require additional flood protection due to the special health and safety risks caused by flooding.

* Evaluate current federal, state, and local flood impact review requirements for infrastructure improvements and other development in the flood plain, and recommend changes to reduce the potential loss of life, property damage, economic losses, and threats to health and safety caused by flooding.

* Examine the differences in federal cost-sharing for construction and maintenance of flood control projects on the Upper and Lower Mississippi River systems and assess the effect of such differences on the level of flood protection on the Upper Mississippi River and its tributaries.

* Assess the current federal policy on pre-event repair and maintenance of both federal and non-federal levees and recommend actions to help prevent the failure of these levees during flooding.

* Assess the impact of the current system of levees and flood control projects on the flood levels experienced on the Upper Mississippi River and its tributaries in 1993, and evaluate the cost-effectiveness of alternative flood control measures such as the preservation and restoration of wetlands.

* Recommend flood control improvements, changes in federal cost-sharing, and other measures to reduce economic losses, damage to critical public facilities, and the release of hazardous materials from industrial, petrochemical, hazardous waste, and other facilities caused by flooding of the Upper Mississippi River and its tributaries.

* Assess the environmental impact of current flood control measures and the flood control improvements recommended in the study.

Members cosponsoring the bill are: Majority Leader Dick Gephardt (D-Mo.), Reps. Bill Clay (D-Mo.), Jerry Costello (D-Ill.), Pat Danner (D-Mo.), Lane Evans (D-Ill.), Bill Emerson (R-Mo.), Jim Leach (R-Iowa), Jim Lightfoot (R-Iowa); David Minge (D-Minn.); Jim Nussle (R-Iowa); Glenn Poshard (D-Ill.); Neal Smith (D-Iowa), Harold Volkmer (D-Mo.) and Alan Wheat (D-Mo.).

(Presented by Scott Faber,
Director of Floodplain Programs)

TESTIMONY OF

AMERICAN RIVERS, INC.

ENVIRONMENTAL DEFENSE FUND

AND

WORLD WILDLIFE FUND

ON FLOOD OVERSIGHT HEARINGS

BEFORE THE WATER RESOURCES AND ENVIRONMENT

SUBCOMMITTEE

HOUSE PUBLIC WORKS AND TRANSPORTATION

COMMITTEE

OCTOBER 27, 1992

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Mr. Chairman, members of the Subcommittee, I appreciate the opportunity to testify today on the federal response to the recent midwest flooding. My name is Scott Faber, and I am Director of Floodplain Programs for American Rivers, a national conservation organization dedicated to the protection and restoration of our nation's rivers and streams. I am testifying today on behalf of American Rivers, the Environmental Defense Fund, and the World Wildlife Fund, conservation groups that together have more than 1 million members. These organizations have been working on flood-related issues closely with a network of state and local groups, many of whom are members of the Mississippi River Basin Alliance.

THE UPPER MISSISSIPPI FLOOD CONTROL "SYSTEM"

The billions of dollars of flood damage caused this summer reflects the inadequacies of an unplanned flood control "system," a collection of disintegrated efforts that have replaced natural flood control functions with structural solutions like levees and dams. Instead of allowing the rivers to fan out and take advantage of the natural flood control functions of floodplains, we have spent billions of dollars to force the river into ever-tighter channels, raising flood crests and creating a false sense of security that continues to encourage floodplain development.

Was the Great Flood of 1993 simply an act of nature? We believe that flooding and flood damages were exacerbated by human-made "flood control" structures which studies show increase flood heights, and by land management practices designed to drain the land quickly. In the past, the Mississippi eroded its bottom and banks during flood peaks, making room for floodwaters by increasing the storage capacity of the channel and by using the floodplain as a natural reservoir. By the time the Great Flood of 1993 arrived, the channel had lost about one-third of its potential volume to sedimentation, and the floodplain had been replaced by farms and cut off from the river by a wall of sand, concrete, and gravel. Floodplain wetlands that once helped to store floodwater and then release it slowly back into the stream have been replaced by farmland engineered to move water off the landscape as quickly as possible.

Several studies also suggest that the destruction of wetlands, and drainage practices generally, increased flood heights. In a watershed where lakes and wetlands are preserved, water is released at different rates and reaches the channel at different times. In contrast, a watershed engineered to move

water off the land quickly through drains and channels will release water simultaneously, increasing flood crests.

One researcher studying the effect of wetlands losses on streamflows in Wisconsin found that flood peaks might be as much as 80 percent lower in basins with significant lake and wetland areas.[1] Others have come to similar conclusions, finding that the hydrologic detention function of wetlands reduce the size of flood pulses.[2] The most recent study, an August 1993 report prepared by the Illinois State Water Survey, once again confirmed that wetlands act as natural sponges, storing water and releasing it over time. The study found for every 1 percent increase in the area of a watershed's wetlands, a flood's peak flow in the streams that drain that watershed is reduced by an average of 3.7 percent.[3]

Consider then what might have happened if more than 20 million acres of wetlands had not been eliminated from the drainage basins of the Mississippi and Missouri rivers north of St. Louis since the late 1700s. Illinois, Iowa and Missouri -- the states which suffered the most damage this summer -- have

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[1] R.P. Novitski, Hydrology of Wisconsin's Wetlands, U.S. Geological Survey, Madison, Wisconsin (1982).

[2] see generally Hollands, G.G. and G.E. Hollis and J.S. Larson (1986), Science Base for Freshwater Wetland Mitigation in the Glaciated Northeastern United States: Hydrology, in Larson and C. Neill (eds.), Mitigating Freshwater Wetland Alterations in the Glaciated Northern Eastern United States: An Assessment of the Science Base. C.H. Prior and J.H. Hess, Floods In Minnesota, Magnitude and Frequency, Minnesota Department of Conservation (1961). C.T. Haan and H.P. Johnson, Hydraulic Model of Runoff from Depressional Areas, American Society of Cultural Engineers, 11:364-367 (1968). D.W. DeBoer and H.P. Johnson, Simulation of Runoff from Depression Characterized Watersheds, American Society of Agricultural Engineers, 14(4):615-620 (1971). K.L. Campbell and H.P. Johnson, Hydrologic Simulation of Watersheds with Artificial Drainage, Water Resources Research 11(1):120-126 (1975). I.D. Moore and C.L. Larson, Effects of Drainage Projects on Surface Runoff from Small Depressional Watersheds in the North Central Region, Water Resources Research, Bulletin 99 (1979).

[3] Misganaw Demissie and Abdul Khan, Influence of Wetlands on Streamflow in Illinois, Illinois State Water Survey for the Illinois Department of Conservation, at 49 (1993) [hereinafter Influence of Wetlands].

lost 85 percent or more of their wetlands.[4] According to the Wisconsin Department of Natural Resources, a five percent increase in the wetland acreage in Wisconsin and Minnesota, which together drain about one-third of the Mississippi River basin above St. Louis, would reduce the influx of flood waters by 1.5 billion gallons a day.[5]

Levees also create a false sense of security that encourages floodplain development, according to the Federal Interagency Floodplain Management Task Force. [6] Perhaps Chesterfield, Mo., where an industrial park and small airport was flooded this summer, best highlights the failure of our federal policies to direct development away from flood-prone areas. St. Louis County officials, beginning in the late 1960s, aggressively promoted a corporate airpark, a small-scale "Silicon Valley," in an area of frequently flooded Missouri bottomlands. The business park was ostensibly protected by an old agricultural levee. Because of the levee, many of the businesses were taken out of the mapped floodplain, and were told by their private insurers that they did not need to purchase flood insurance. When the levee failed on July 30, 1993, the floodwaters caused more than $750 million in damage, including lost wages for 4,500 workers.

As in Chesterfield, our nation's flood control efforts have fallen victim to the tyranny of small decisions. A lack of integrated planning has not only put people and property at risk, increasing the expense for the taxpayer, it has also degraded water quality, reduced waterfowl populations, and threatened the survival of many species by destroying critical habitat and encouraging development near the river's edge.

ENVIRONMENTAL EFFECTS OF FLOOD CONTROL EFFORTS

Up to 40 percent of America's ducks, geese, swans and wading birds use the Mississippi River as a flyway. Ten federally

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[4] Thomas E. Dahl, Wetlands Losses in the United States 1780s to 1980s, Department of Interior, U.S. Fish and Wildlife Service, at 21 (1990).

[5] Whereatt, R. and D. Rebuffoni (1993) Governors forge alliance on high-speed rail; Minnesota, Wisconsin also to cooperate on flood control, Minneapolis Star Tribune, Sept. 11, 1993.

[6] Floodplain Management in the United States: An Assessment Report (1992).

listed endangered species inhabit or visit the Upper Mississippi.[7] The basin also produces over $1.2 billion in annual revenue from recreational and related uses, which support more than 18,000 jobs.[8]

The creation of levees destroys critical habitat along the river's edge. Nearly all of the Mississippi has been straightened, leveed or altered in some way to aid navigation and flood control. The oxbows and meanders that once provided critical fish habitats have been destroyed. In places where the banks of streams have been cleared and the streambed straightened, the natural values of associated wetlands -- flood control, fish spawning, and plant productivity -- have been reduced or eliminated.

Most of the fish that are important in commerce and recreation breed and grow in the wetlands surrounding the open waters. Wetlands also improve water quality by absorbing substantial amounts of the nutrients and chemical contaminants that are stressing the river. Decaying wetland plants are washed into the river during spring floods and eaten by juvenile fish and aquatic insects who are in turn eaten by larger predaceous fish.

When people alter an environment, they shift the delicate balance among its many parts. In the case of the Mississippi River, development has simplified an entire ecosystem, reduced the diversity of habitats, which, in turn, has reduced the variety of plants and animals. The threats to the ecology of the Mississippi take many forms. At this time, there are about 390 fish species found in the Mississippi River basin. The fact that 61 native riverine species are listed by states as threatened, endangered or nearly extinct on the mainstem of the river alone tells us that critical food webs and nutrient cycles have been disrupted.

During this summer's devastating flood, high concentrations of atrazine and other herbicides that inhibit photosynthesis were measured in the river, as were high concentrations of inorganic

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[7] National Fish and Wildlife Foundation, The Mississippi River Initiative (1993).

[8] U.S. Army Corps of Engineers, Economic Impacts of recreation on the Upper Mississippi River System -- Draft Summary (unpublished), St. Paul District (1993).

nutrients.[9] Run-off from the farmland that now dominates the banks of the Mississippi flushed into the river these inorganic nutrients called phosphates and nitrates that upset the balance of activity between oxygen users and oxygen producers.

Non-structural solutions that restore the floodplain to its natural state improve water quality by restoring wetlands that filter pollutants.[10] Greenway projects that convert riverside land into parks would also restore critical habitat for migratory waterfowl and other organisms.

RECOMMENDATIONS

1. Provide Communities with Real Choices

We have a chance to reverse policies that have destroyed the environment, put people and property at risk and unnecessarily cost the taxpayers billions of dollars in flood relief. Dozens, possibly hundreds, of river towns are taking the first steps to move out of the floodplain. Even more are pursuing other non-structural alternatives like floodproofing and elevation. We must do everything to encourage these alternative processes, which move people out of harm's way, reduce the long-term burden on the taxpayer, and allow the river to reclaim its natural reservoir, the floodplain.

Existing programs practically compel communities to rebuild in flood-prone areas. The federal response to date has shown that the Robert T. Stafford Disaster Relief and Emergency Act is not flexible enough to take advantage of long-term flood loss reduction opportunities. More than 50 communities are taking the first steps to partially or totally relocate from flood-prone areas in the Midwest. As many as 200 may ultimately undertake relocation projects. Unfortunately, existing law is skewed in favor of disaster relief that encourages people to rebuild in harm's way and against disaster prevention.

Perhaps $500 million will be spent on non-structural solutions. In contrast, more than one-third of the relief -- $2.35 billion -- will be delivered in the form of one time crop-

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[9] U.S. Geological Survey, Occurrence and Transport of Agricultural Chemicals in the Mississippi River Basin, July Through August, 1993 (1993).

[10] Olson, R.K. Evaluating the role of created and natural wetlands in controlling nonpoint source pollution, in Ecological Engineering (1992).

loss payments to farmers through the Commodity Credit Corporation. What little money that is available for long-term flood loss reduction is divided among six agencies, and at no time do these agencies determine what kinds of actions, if taken in concert, would minimize the overall cost to taxpayers.

For most of these communities, the final decision to relocate may depend on how much federal, state and local money is available and how quickly relocation packages can be developed. Few have the needed expertise. We believe that the committee must act quickly to provide greater flexibility in the use of disaster assistance to meet the needs of these communities, and that the Administration must use its existing authority by building outreach teams that help communities relocate and explore other non-structural solutions.

We commend Representative Harold Volkmer for the introduction of H.R. 3012, the Comprehensive Cost Effective Relocation Act of 1993, an important first step towards creating relocation alternatives. This measure goes a long way toward addressing fundamental flaws in our nation's flood prevention policies, so evident in the wake of this summer's disastrous Midwest flood, by increasing the federal contribution to the Federal Emergency Management Agency's principal relocation grant program and by allowing the Director of FEMA to increase the money available for long-term flood reduction. But we believe that this important measure should go further by allowing the Director of FEMA to spend additional funds on relocation, so long as relocation is cost-effective and voluntary, and by waiving the requirements of the Uniform Relocation Act when relief funds are used for mitigation.

Furthermore, the committee should use its full jurisdiction and authorize all of the agencies involved in relief efforts to utilize any disaster appropriations they have for this flood to fund any disaster response that will minimize future flood damages by opening up the floodplain. The conditions should be: that the alternative increases floodplain storage or conveyance capacity; that the alternative will minimize long-term federal costs under existing programs; and that the alternative is preferred by the community and by the individual property owner.

We believe that all of these agencies, not simply FEMA, should be given enough flexibility to take advantage of opportunities to reintegrate the floodplain. A comprehensive flood management system must take better advantage of the natural flood control functions of its associated wetlands. The acquisition of farmland from willing sellers, the purchase of flood easements that could be used during big floods, the

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wetlands reserve program, trading set asides between floodplain and upland farmers, and debt for nature swaps are all options that can be used to expand the floodplain and increase the flood storage and conveyance capacity of the floodway. Unfortunately, these options, though supported by many farmers, have not been utilized.

The Clinton Administration has made it clear that they want an innovative, comprehensive response to this flood that reduces long-term flood losses and begins to restore the natural flood control functions of floodplains. The Administration's August 23 memorandum to the Corps and other relevant federal agencies requires the consideration of nonstructural alternatives and design modifications that could provide greater local benefits of flood control, reduction of future potential flood damages to the applicant and adjacent upstream and downstream localities, lower long-term costs to the federal government and natural resource protection.[11] The Mississippi River Basin Association, a group of state natural resource professionals appointed by five Midwest governors, has also called for non-structural solutions.

Relocation from the floodplain not only protects people and property, it also reduces the long-term burden on the taxpayer, and restores the natural flood control functions of floodplains. In Illinois, six communities are pursuing relocation, acquisition and elevation projects -- Grafton, Hull, Keithsburg, Kampsville, Hardin, and Quincy-- and an additional 20 communities are also interested in relocation programs. Field staff estimate that as many as 100 more communities, most with populations under 1,000, may ultimately be interested in relocation or acquisition programs.

In Iowa, there are 15 counties that have indicated interest in acquisition or elevation programs. Many are in suburban Des Moines, one of the areas hardest hit by the floods. FEMA has identified 17 communities in Missouri that are interested in relocation or acquisition projects, each of which would involve at least 25 homes.

The state of Kansas has released a formal relocation plan for a handful of communities. In Minnesota, six communities including Springfield, Rockford, Pipestone, and Marshall are interested in acquiring a total of 60 structures. Three other

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[11] T.J. Glauthier and Katie McGinty, guidance memorandum regarding Procedures for Evaluation and Review of Repair and Restoration Projects for Levees, Aug. 23, 1993, Executive Office of the President, Office of Management and Budget (1993).

communities may also be interested. One community with 50 more than homes outside of Omaha, Nebraska is taking the first steps towards relocation. Four communities in Wisconsin have expressed interest in relocation or acquisition projects, involving a total of 142 structures.

While there are several programs available for relocation, conflicting rules, regulations and restrictions, and expensive local contributions, are acting as strong disincentives. For example, the two primary grant programs available for relocation -- the Hazard Mitigation Grant Program of the Federal Emergency Management Agency (FEMA) and the Community Block Development Grant Program of the Department of Housing and Urban Development (HUD) -- measure the value of property differently: FEMA uses pre-flood market value; HUD uses post-flood market value. The two agencies also have different interpretations of the requirements of the Uniform Relocation Act.

All of the grant and loan programs offered by FEMA, HUD, SBA, and FHA have different eligibility and local cost-sharing requirements. Some require that all properties must be covered by flood insurance at the time the damages occurred; others must have been damaged to at least 50 percent of value or damaged three times in five years to at least 25 percent of value. Another program is only available for low income senior citizens.

2. Provide Planning Assistance for Communities

In order for communities to have real choices, they need not only the legal authority but the capacity to evaluate options. Most communities in the Midwest are simply applying for every possible program, regardless of its requirements. Perhaps the most critical obstacle to relocation right now is the lack of planning assistance. No single agency is responsible for piecing together all of these programs. Although "packaging" of programs is essential for relocation efforts, most relocation projects are being organized by part-time officials like Grafton, Illinois Mayor Gerald Nairn or by town managers with no previous experience in relocation.

Although the U.S. Army Corps of Engineers has moved dozens of communities and has two programs designed to provide planning assistance for local communities seeking help with relocation, its expertise has gone untapped. Similarly, the National Park Service Rivers and Trails Program has also helped move whole communities, and has proposed initiating 20 pilot projects in the Upper Mississippi River basin that move people out of the floodplain and create riverside parks, but has not been asked by FEMA to provide planning assistance. Clearly, these important

resources should be put to use. We support amending the Robert L. Stafford Disaster Relief and Emergency Assistance Act to require that FEMA coordinate with other agencies to the extent possible to provide teams for communities that have expressed an interest in relocation.

With the help of FEMA, the Corps, and the Rivers and Trails Program, past communities have rejected traditional engineering approaches to flood control in favor of non-structural approaches that take advantage of the natural flood control functions of the floodplain. After repeated flooding, the residents of Soldiers Grove, Wisconsin relocated the entire business district from the floodplain of the Kickapoo River to an upland site. The land near the river was converted to a riverside park.[12]

Other examples include:

o Charles River: Federal, state and local officials protected 8,500 acres of wetlands along the upper Charles River in Massachusetts as part of a "Natural Valley Storage" Project. The cost of buying the wetlands was $10 million, far less than the $100 million that would have been spent to build upstream dams and levees.[13]

o South Platte River: The City of Littleton, Colorado established a 625-acre floodplain park along 2.5 miles of the

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[12] A Casebook in Managing Rivers for Multiple Uses, Department of the Interior, National Park Service, at 29 (1991) [hereinafter Casebook].

[13] Casebook, at 5, supra note 12. The Corps study concluded that upstream wetlands played a critical role in reducing flooding further downstream, and that wetlands were found to act like a series of reservoirs, absorbing and storing flood waters, and then releasing water over time. The final report found that "nature has already provided the least-cost solution to future flooding in the form of extensive wetlands which moderate extreme highs and lows in stream flow. Rather than attempt to improve on this natural protection mechanism, it is both prudent and economical to leave the hydrologic regime established over the millennia undisturbed." see U.S. Army Corps of Engineers, New England Division, Natural Valley Storage: A Partnership with Nature. Public Information Fact Sheets, Spring 1976, Spring 1977, Spring 1978; and Arthur F. Doyle, The Charles River Watershed: A Dual Approach to Floodplain Management, in Proceedings of the National Wetland Symposium: Wetland Hydrology, Association of State Wetland Managers (1988).

South Platte River. The park doubles as a natural area where water can be absorbed and temporarily stored during big floods.[14]

o Boulder Creek: Officials in Boulder, Colorado created a 5-mile recreational greenway and bike path along Boulder Creek. Wetlands have been created or restored to temporarily absorb and store stormwater. Meanwhile, the trout fishery has been restored and the park has become a central meeting point for the community.[15]

o Mingo Creek: The City of Tulsa, after a series of floods, developed a greenway plan for Mingo Creek that links parks and trails with multipurpose flood control structures.[16]

3. Support an interagency, comprehensive flood control management strategy in which environmental restoration is a primary objective.

No single piece of legislation or other authority outlines a comprehensive set of measurable goals and objectives for the nation's floodplain management. At the federal level, there are at least 25 subdivisions of 12 departments and agencies that have some small piece of the nation's flood control puzzle. At the same time, states administer locally adopted and enforced land-use regulations, and local governments oversee local drainage and stormwater management. This subjects the overall issue of flood management to the tyranny of small decisions.

A series of laws, executive orders and directives, administrative regulations, interagency actions and agency policies and programs attempt to thread together all of these flood control efforts. There is no lead agency. The Federal Emergency Management Agency chairs a voluntary interagency task force that reviews the web of programs, policies and regulations but has no authority to make changes. Inconsistencies of purpose, overlaps, gaps, and conflicts persist.

Some of the inconsistencies result from differing attitudes and expectations about the ultimate responsibility and commitment of resources to respond to floodplain problems. Agencies also

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[14] id. at 13

[15] id. at 39

[16] id. at 69-73.

work at cross purposes, and there is little cooperation among the administrators of these federal programs.

We commend Representative Richard Durbin for introducing H.R. 2931, which would assign the Corps the task of making a comprehensive analysis of floodplain management in the Upper Mississippi River basin. However, we believe that the comprehensive review should be conducted by an interagency task force, as aspects of our flood control policies, like agriculture, are outside the Corps' area of expertise. If our nation's flood control policy is to be successful, it must be truly integrated. The Clinton Administration has already moved to establish an interagency technical team to begin to grapple with the scientific issues that comprehensive review will raise, and this committee should support that initiative. H.R. 2931 should also explicitly require the inclusion of environmental restoration as a component of our national strategy.

4. Avoid Short-Sighted Quick-Fix Solutions

Aside from increasing flood crests, creating a false sense of security and destroying critical habitat, levees also drain the federal treasury by constantly needing repair. The Chesterfield levee and others like will once again be rebuilt with federal dollars. The levees themselves present a continual drain on the federal treasury.

Nevertheless, some policy makers would simply return to the status quo. On October 15, 1993, the Senate adopted an amendment to H.R. 3116, the Defense Appropriations bill, which would allow most of the failed levees in the Midwest to be rebuilt, regardless of a levee owners' participation in the U.S. Army Corps of Engineers' levee rehabilitation program. We oppose the amendment for the following reasons:

o The amendment threatens the funding of previously approved projects. The Corps' projected spending already exceeds the funding it received in the August supplemental. The Corps received $180 million in the supplemental and has projected that it will spend $250 to repair eligible levees. The amendment would add $1 billion to the cost of the relief effort.

o The amendment violates the Administration's August 23 memorandum, issued by T.J. Glauthier and Katie McGinty, to the Corps and other relevant federal agencies, to consider nonstructural alternatives and design modifications that could provide greater local benefits of flood control, reduction of future potential flood damages to the applicant and adjacent upstream and downstream localities, lower long-term costs to the

federal government and natural resource protection. The amendment would eliminate incentives and opportunities to pursue non-structural alternatives, and would not require the consideration long-term flood loss reduction.

o The amendment creates disincentives to participate in the rehabilitation program. The rehabilitation program is a quid pro quo agreement between the Corps and local sponsors that requires the local sponsor to maintain a levee to certain standards. This amendment sends a message to local sponsors that the federal government will rebuild a levee regardless of participation in the program or poor maintenance. Many of the levees may not have the financial resources for proper maintenance, leading to future failures creating a continual need for federal assistance.

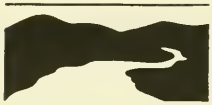
o The amendment encourages unsound levee building. The current Corps program is based on principles that encourage economically-sound levee building to protect communities, important infrastructure and productive cropland. Many of the levees are ineligible for public assistance because they did not meet Corps construction standards or were not properly maintained prior to the flood. The amendment would encourage future development of levees to widely varying standards, with the expectation that the government will repair levees regardless of participation in the rehabilitation program, construction standards or poor maintenance.

o The amendment is unfair to levee districts that have spent millions of dollars to maintain their levees to Corps specifications. Many levee districts that have adequately maintained their levees in the past will be encouraged to reduce their maintenance costs, expecting that the federal government will pay for repairs regardless of poor maintenance.

CONCLUSION

The Mississippi River has sent us a very powerful message: that our reliance on short-sighted engineering solutions and our land management practices have made matters worse. The great tragedy of the Great Flood of 1993 is that it was predictable.

Living along a river like the Mississippi is not unlike living on the edge of an active volcano. But as long as our disaster programs are skewed in favor of disaster relief and against disaster prevention, people will continue to rebuild in harm's way. We need to use our limited resources to help people voluntarily move away from the river, to get them out of flood-prone areas and to take advantage of the natural flood control functions of the floodplain.



The people of the Midwest need real choices.

The Mississippi River has sent us a powerful message: that our costly engineering solutions to flood control combined with poor management of the land have made matters worse. Instead of allowing the river to fan out and take advantage of the natural flood control functions of floodplains, we have spent billions of dollars to force the river into ever-tighter channels, raising flood crests and creating a false sense of security that has encouraged floodplain development.

The need for change has never seemed greater, and the opportunities never better. President Clinton has said we need new ideas that use non-structural means of flood control. Republicans and Democrats in Congress, the Governors from five Midwest states, and our top federal administrators all agree that now is the time to reverse more than a century of faulty flood control policy.

We need to use our limited resources to help people voluntarily move away from the river, to get them out of flood-prone areas, to restore wetlands and to take advantage of the natural flood control functions of the floodplain. It's been done before. In Soldier's Grove, Wisconsin, residents moved the entire business district out of harm's way. In Tulsa, Oklahoma, city officials built a city park along the river that doubles as a stormwater detention areas.

Powerful forces are working against the people of the Midwest. Federal and state agencies are once again using disaster relief money to return to the status quo by simply repairing and improving structures. FEMA and HUD are hamstrung by regulations and restrictions. The Army Corps of Engineers, despite guidance from President Clinton, is still not giving enough consideration to low-cost, far-sighted alternatives to levee rebuilding.

Time is the most powerful force of all. The people of the Midwest are understandably anxious to rebuild their lives, and need answers quickly. Most of all, the people of the Midwest need **real choices.** They can not afford to return the status quo, and the taxpayers can not afford to continue to pick up the bill.

This paper describes many alternatives to traditional structural flood control methods.

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Relocation

More than 50 communities have taken the first steps to partially or totally relocate from flood-prone areas in the Midwest. However, the final decision may depend on how much federal, state and local money is available and how quickly relocation packages can be developed.

Although relocation from the floodplain protects people and property, reduces long-term flood costs, and restores natural flood control functions, policy makers have traditionally been reluctant to advocate relocation and acquisition. There are several programs available for relocation, but conflicting rules, regulations and restrictions, and expensive local contributions, have acted as strong disincentives. There is also little planning assistance available to individuals and communities.

Even so, many communities have in recent years rejected traditional engineering approaches to flood control in favor of non-structural approaches that move people and property out of harm's way and allow the river to spread out and use the natural flood control functions of the floodplain. After repeated flooding, the residents of Soldiers Grove, Wisconsin relocated the entire business district from the floodplain of the Kickapoo River to an upland site. The land near the river was converted to a riverside park.

Other examples include:

o **Charles River:** Federal, state and local officials protected 8,500 acres of wetlands along the upper Charles River in Massachusetts as part of a "Natural Valley Storage" Project. The cost of buying the wetlands was $10 million, far less than the $100 million that would have been spent to build upstream dams and levees.

o **South Platte River:** The City of Littleton, Colorado established a 625-acre floodplain park along 2.5 miles of the South Platte River. The park doubles as a natural area where water can be absorbed and temporarily stored during big floods.

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o **Boulder Creek:** Officials in Boulder, Colorado created a 5-mile recreational greenway and bike path along Boulder Creek. Wetlands have been created or restored to temporarily absorb and store stormwater. Meanwhile, the trout fishery has been restored and the park has become a central meeting point for the community.

o **Mingo Creek:** The City of Tulsa, after a series of floods, developed a greenway plan for Mingo Creek that links parks and trails with multipurpose flood control structures.

o **Chattahoochee River:** The State of Georgia created a 4,000-foot-wide river corridor that incorporated standards for buffer zones and flood hazards that local governments enforce.

Current Midwest Relocation Projects

The following is a preliminary list by state of communities that have indicated an interest in relocation or acquisition projects. The number may rise as additional outreach is conducted by field staff.

Illinois

There are six communities working with FEMA on relocation, acquisition and elevation projects: Grafton, Hull, Keithsburg, Kampsville, Hardin, and Quincy. An additional 20 communities are also interested in relocation programs. Field staff estimate that as many as 100 more communities, most with populations under 1,000, may ultimately be interested in relocation or acquisition programs.

Specific communities are East Dubuque, Campbell Island, Keithsburg, Gulfport, Dallas City, Pontoosuc, Niota, Warsaw Bottoms, Hull, Hardin, Grafton, Elsah, Alton, Valmeyer, Harrisonville, Fults, Kidd, Rockport, Cora, and Olive Branch.

Iowa

There are 15 counties that have indicated interest in acquisition or elevation programs. Many are in suburban Des Moines, one of the areas hardest hit by the floods. Specific communities are Abel Island, Spirit Lake, Bartlett, Maquoketa, Iowa City, Baculis, Thatcher, West Coralville, Fort Madison, Pella, Marshalltown, Valley Garden, Muskogee, Birdland, Goosehaven, Malmore Acres, Council Bluffs, Davenport-Bettendorf, Harlan, Chelsea, Montour, Tama, Riverside, and Bonabarte.

Kansas

Five communities, with multiple acquisition projects totalling about 100 properties, have been identified. The projects are expected to cost $4-5 million, to be funded through

the Hazard Mitigation and Community Development Block grant programs. Five additional communities may also be interested.

Minnesota

Six communities are interested in acquiring a total of 60 structures, at a total cost of $4 million. The communities include Springfield, Rockford, Pipestone, and Marshall. Three other communities may also be interested.

Missouri

FEMA has identified 17 communities that are interested in relocation or acquisition projects, each of which would involve 25-100 homes. The communities include Arnold, Jefferson City, Hannibal, Fenton, St. Charles, Festus, Bellefontaine, Commerce, Washington, Agency and Crystal City, and St. Charles, Sardy, Cape Girard, Warren, Riley, Jefferson, Lincoln, Platte, and Boone counties have all requested information about relocations or acquisitions.

Nebraska

One community with 50-100 homes outside of Omaha is very interested in moving. Five other communities are also interested.

North Dakota, South Dakota, and Wisconsin

Only one community in North Dakota, Valley City, is interested; Two communities in South Dakota, Montrose and Madison, are interested. Four communities in Wisconsin have expressed interest in relocation or acquisition projects, involving a total of 142 structures.

Relocation Programs

The following is a list of funds available for relocation.

Federal Emergency Management Agency

The **Hazard Mitigation Grant Program** provides 50 percent of the cost of elevation, acquisition, and relocation. The Program has $45 million in funding through the supplemental appropriation. The state may pick up as much as 25 percent of the cost. Legislation is pending in Congress that would change the cost-share to a 90 percent federal contribution for relocation, and allow FEMA to lift the cap on relocation spending.

The state is responsible for identifying projects. Although states and local government are usually the eligible applicants, funds can be provided to individuals for these projects.

The **National Flood Insurance Program** provides funds to purchase flood-damaged properties and provide property owners the opportunity to relocate. The program is subject to the following restrictions:

o All properties must be covered by flood insurance at the time the damaged occurred, and must have been damaged to at least 50 percent of value or damaged three times in five years to at least 25 percent of value.

o Programs funds can not be used to acquire vacant land.

o After relocation, land must be converted to some kind of open space use, and the community must agree to accept title to the purchased property and manage it for open space purposes.

The program has $4.5 million through its annual appropriation, but the small number of flood insurance policies in force in the Midwest will limit its applications.

Community Disaster Loans are available to local governments that suffer a substantial loss of tax and other revenue as a result of a major disaster and have demonstrated a need for financial assistance in order to perform government functions. Many of the communities that have lost structures through relocation projects are eligible.

Loans can not exceed 25 percent of the annual operating budget of that local government for the fiscal year in which the major disaster occurs. Repayment of all or any part of the loan can be cancelled under certain conditions.

Several **Individual Assistance Programs** can also be used for elevation or relocation.

The **Individual and Family Grant Program** can be used in conjunction with other programs to elevate or relocate individual structures. The maximum grant is $11,900.

Disaster Housing Assistance can be provided to individuals for up to 18 months while relocation and elevation programs are being developed and implemented.

The **Cora Brown Fund** can be used for relocation out of hazardous areas, and for hazard mitigation and floodplain management.

For information about these programs, call (800) 462-9029

Housing and Urban Development

The Community Block Development Grant Program can fund acquisition, relocation, or elevation. Congress provided an additional $200 million for the program, but HUD has tough restrictions on spending.

The **HOME Program** provides grants to states and larger cities and larger cities and urban counties for permanent housing for low-income persons. The community may decide to grant or loan funds to individuals, and the funds can be used for acquisition, new construction or elevation. Congress provided an additional $50 million for the program

For information about these programs, call (202) 708-1422

Small Business Administration

The Small Business Administration provides **disaster loans** to homeowners and businesses to repair or replace property damaged in a declared disaster. Loans may be used to meet required building codes, and may also be used for involuntary relocations out of special flood hazard areas, when required by officials. SBA loans generally can not be used for voluntary relocation but there are some exceptions. Loans are available up to $120,000 for homeowners, $20,000 for renters, and $500,000 for businesses.

For information about these programs, call (800) 827-5722

Farmers Home Administration

The Farmers Home Administration is authorized to make rural housing loans and grants to buy, build or repair homes in rural areas.

The Section 502 Home Ownership Loan Program for low income applicants can be used for elevation or relocation. Congress provided $1.2 billion in the supplemental, and the maximum loan amount is $105,000.

The Section 504 Home Improvement Loans and Repair Loans and Grants Program can provide funds to elevate homes or farm structures: $12.5 million was added to the loan program and $12.5 million was added to the grant program through the supplemental. The maximum grant is $5,000, and is only available to low income senior citizens. The maximum loan is $15,000.

FhMA Emergency Loans are available for family farmers and ranchers to refinance existing debt, and to cleanup and restore farm structures. Loans are provided at 4.5 percent interest over a 3-40 year period for physical losses. The supplemental appropriation added $80 million to the program.

For information about these programs, call (202) 720-4323

The Army Corps of Engineers

The Corps, under the **Section 205 Program**, is authorized to relocate homes out of the floodplain if it proves to be more cost effective than a structural flood control measure.

For information about this program, call 314-331-8001

Important Relocation Phone Numbers:

FEMA Disaster Information Hotline	(800) 621-3362
National FEMA Teleregistration Center	(800) 462-9029
for hearing impaired	(800) 462-7585
National Flood Insurance Information	(800) 638-6220
Internal Revenue Service	(800) 829-1040
Wisconsin and Minnesota	(800) 621-3362
Nebraska, Kansas, and Missouri	(800) 853-3362
North Dakota and South Dakota	(800) 330-4250
Illinois	(800) 820-1125
Iowa	(800) 858-6918

Wetlands Restoration

More than 19 million acres of wetlands have been eliminated from the drainage basins of the Mississippi and Missouri rivers north of St. Louis since the late 1700s. Replacing some of these lost wetlands would not only reduce future flood peaks but would improve water quality and provide critical habitat. Wetlands naturally control floods by temporarily detaining floodwaters.

Wetlands also "desynchronize" flood peaks. In a watershed where lakes and wetlands are preserved, water is released at different rates and reaches the channel at different times. In contrast, a watershed engineered to move water off the land quickly through drains and channels will release the water simultaneously, increasing flood crests.

Watersheds that still have many of their wetlands intact generally have smaller floods. In Wisconsin, flood flows are 80 percent lower in basins with a 40 percent lake and wetland area than in basins with no wetland area. A study of watersheds in Illinois showed the flood flow volume/total precipitation ratio decreased in areas with more wetlands.

The ability of wetland vegetation to remove pollutants from farms and industry is well-known. Wetlands intercept and filter polluted run-off, and are increasingly being used to manage stormwater. Wetlands near the Mississippi also provide critical habitat for as many as 40 percent of the nation's ducks, geese, swans and wading birds, and for several endangered fish species.

Wetlands Restoration Programs

The following programs can be used for wetlands restoration.

The Soil Conservation Service

The Soil Conservation Service received $60 million in disaster relief and plans to spend up to $20 million to enroll farmers in the **Wetlands Reserve Program.** Established by the 1990 Farm Bill, the program provides financial incentives for restoration and protection of wetlands if farmers agree to long-term (30-year or permanent) easements. USDA is authorized to enroll up to 1 million acres of wetlands in the WRP between 1991 and 1995 at a rate of 200,000 acres per year.

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SCS may also receive $66.7 million for the Wetlands Reserve Program in its FY1994 budget, which is pending before the Senate. Those funds may be eligible for Midwest farmers.

The program applies to the restoration and protection of farmed or converted wetlands (converted prior to Dec. 23, 1985), croplands adjacent to wetlands to serve as buffer areas, and riparian areas that link eligible wetlands. Participants receive 10 equal annual payments for less-than permanent easements or a single lump sum for permanent easements, 50 percent cost-sharing for permanent easements for implementing conservation measures, and technical assistance.

Fish and Wildlife Service

The Fish and Wildlife Service operates a **Private Lands Program** with private landowners to restore wildlife habitat values on all types of private lands. Technical and financial assistance is provided to restore drained or partially drained wetlands, riparian and aquatic stream habitats, endangered and other rare wildlife species habitats, migratory bird habitats, and native prairie and bottomland hardwood habitat.

Prior to project construction, landowners must sign an agreement to maintain the restoration for a minimum of 10 years. Participants receive close to 100 percent cost-sharing, and other organizations may contribute to reduce landowner expenses.

The **Challenge Cost Share Program** is managed to create private and non-profit partnerships to protect and restore wetlands and other habitats. The FWS works with non-federal sources to develop projects that assist in operations and maintenance of public lands, and to improve habitat on private lands through management, restoration and education efforts.

The Army Corps of Engineers

Planning Assistance can be provided by the Corps to help states with comprehensive planning for water and related land resources.

The Corps also has a **Floodplain Management** program to promote the recognition of flood hazards in land and water-use planning and development by providing information, technical services and guidance.

The Corps has authority under **P.L. 84-99** to assist other agencies and to supplement local resources during a flood emergency. The Corps can provide assistance for flood emergency preparation and hazard mitigation, including acquisition.

Farmers Home Administration

FhMA has a **Debt for Nature Program** that helps farmers avert foreclosure by reducing the principle of their loans in exchange for easements on land suitable for conservation, recreation or wildlife. Any FhMA borrower can be considered for debt restructure easements, and non-delinquent borrowers can also participate. Easements are for a minimum of 50 years.

Important Wetland Restoration Phone Numbers:

Wetlands Reserve Program	(202) 720-9482
Farmers Home Administration	(202) 720-4323
Army Corps of Engineers	(314) 331-8001
Fish and Wildlife Service	(202) 208-4131

Other non-structural solutions:

o National Park Service Rivers and Trails Program staff have proposed 20 Upper Basin Community Greenway Projects to create riverside parks that double as stormwater detention areas. In general, the runoff equivalent to a high frequency storm (e.g. a 10-year-event) may be **detained or retained on-site** through a variety of measures: excess runoff may be retained or detained within a regional system of flood control measures; total runoff within a watershed may be managed so that discharges from different sub-units reach the main channel at different times and reduce peak flows. A secondary benefit of on-site detention is water quality improvement.

o **Acquisition** can be funded through numerous programs, including many of same programs that fund relocation. In Shelton, Ct., Hazard Mitigation Grant Funds were used to acquire and remove 56 structures in the floodplain of the Housatonic River. The Army Corps of Engineers is currently identifying land along the Missouri River for acquisition, part of a $69 million mitigation program to replace wetlands destroyed for past navigation projects. The Fish and Wildlife Service has also identified lands to be acquired for wetlands restoration but lacks funding.

o **Floodproofing and elevation** techniques can prevent entry of floodwaters into buildings or minimize the damages from water that is deliberately allowed to enter a building. Techniques include: use of permanent or temporary seals; closures or barriers to prevent floodwater from entering a building; use of water resistant materials; temporary relocation of the contents of a building.

o **Land treatment** measures that may reduce erosion and runoff require the creation of structures to retain or redirect runoff. Some examples include terraces and diversion channels that limit runoff and reduce erosion, and sediment basins and grassed waterways that trap sediment and promote infiltration of runoff. Nonstructural land treatment measures include tillage practices that reduce runoff and erosion, such as cropping patterns that retard runoff, and filter or buffer strips planted along the downslope edges of cultivated fields or between fields and adjacent streams.

o Substantial improvement in riverine **flood forecasts, warnings, and preparation** could be made quickly and with limited cost. Only 900 communities, working with the National Weather Service, have some form of local flood warning system. The remaining communities, about 21,000 in flood-prone areas, receive warnings only through general county-wide flash flood warnings. In general, emergency preparedness has been given a low priority among both structural and nonstructural flood loss methods.

o Lands owned by the **Resolution Trust Corporation** can be used for flood control. Possible uses include wetlands restoration and exchange for lands in the floodplain.

o **Floodplain Zoning Ordinances** can be adopted by state and local governments to regulate floodplain development and protect the natural values and functions of floodplains. Communities that enroll in the National Flood Insurance Program are required to enforce certain regulations and codes, and can reduce insurance premiums by enacting tougher rules.

o **Better maps** of flood-prone areas are essential to getting people out of harm's way. Many of the maps are old and imprecise, and about one-third of flood insurance claims nationally have been paid for flood damage outside the mapped 100-year floodplain, meaning that dwellings in these areas are covered by federal insurance but are not subject to flood management regulations.

The New York Times

NEW YORK, SATURDAY, AUGUST 28, 1993

U.S. Weighs Scrapping Levees for Flood Control

By STEPHEN LABATON
Special to The New York Times

WASHINGTON, Aug. 27 — In the aftermath of the worst flooding in American history, the Clinton Administration is seriously considering proposals to convert entire towns and some large tracts of farmland to wetlands rather than rebuilding levees to protect them.

The idea of buying up towns and leasing some farmland would be a sharp break from decades of national flood-control policy that has relied almost exclusively on the construction of levees and dams. But faced with more than $12 billion in damage and more than 800 levees that either crumbled or were overrun by water, Administration officials are now looking at alternatives.

The proposals are still in their earliest stage of planning, and no decision has been made whether to pursue them. They might also require some Congressional action before they could take effect, and the Government has already begun to fix some of the broken levees.

Still, environmental groups said the fact that the Administration was even contemplating a new approach rather than simply throwing more money at rebuilding old structures reflected how old assumptions had been shaken by the devastating flooding in the Midwest.

'Revolutionary Change'

"I can't overemphasize what a revolutionary change this is," said Scott Faber, a director at American Rivers, a conservation and preservation group that has advocated a new national policy. "Traditionally, when we recover from natural disasters we tend to return to the status quo. The Clinton Administration has taken the first steps to get out front and take preventive steps. They recognize that our reliance on engineering solutions has made matters much worse. Now there is an emphasis on nonstructural solutions."

The idea of buying some towns or leasing farmlands along the river banks was described in Des Moines on Thursday by Agriculture Secretary Mike Espy at a flood-relief conference. It is being studied by a multiagency group that is headed by the Army Corps of Engineers and includes representatives from the White House and the Environmental Protection Agency.

Mr. Espy said there had "been some expression of buying out whole towns that lie within the flood plain," a strategy that would permit rivers to expand without damaging property. "Many have raised the option of the Wetlands Reserve program — that we can go in and lease farmland and not have to rebuild the levee that formerly protected that farmland," he said.

> A cost-conscious Administration may let rivers go back to nature.

Federal and state officials will consider the proposals and begin to try to coordinate their efforts at a meeting next week in St. Louis, which will include representatives from the Federal Emergency Management Administration, the Corps of Engineers and environmental groups. State and Federal policy makers said that the debate over a new policy would center almost exclusively on what to do about rural areas and that levees around big cities would certainly be restored.

"The balance will be whether urban areas, which are seeing their levees repaired, are willing to bear some of the costs that would have to be borne by agricultural areas," said Larry Larson, executive director of the State Association of Flood Plain Managers. He said a comprehensive analysis of the 7,500 miles of levees on the banks of the Mississippi would, by itself, be a sharp departure from the piecemeal way in which they were built.

For the better part of a century, the White House and Congress have poured more than $25 billion into dams and levees maintained by the Army Corps of Engineers and local builders on the banks of the Mississippi, Missouri, Illinois and other rivers. The engineers and policy makers ignored the repeated warnings that the levees were actually a mixed blessing: that while they contained some cresting waters, they increased the chances of greater flooding downstream by drying up wetlands, changing the river channel and increasing the force of the river.

No System Is Perfect

Officials at the Corps of Engineers have argued that no water-control system can be perfect and that the money spent so far on flood control represents a solid investment. They say their control system has prevented at least $250 billion in flood damage over the years, which works out to a 10-to-1 return on the investment.

Still, as the great floods of 1993 have shown, the levees did not always help, but in many instances actually contributed to the damage. The levees also gave many communities what turned out to be a false sense of security. Some 800 of the 1,400 levees along the banks of the overflowing rivers either crumbled or could not hold back the cresting rivers as the waters swamped an area twice the size of New Jersey.

Most of the levees that could not contain the rivers were either built privately or by local governments, although the Corps of Engineers has acknowledged that out of the 275 levees it built in the region, 31 were overrun by water, 8 ruptured because of erosion and 3 were breached.

While the flood waters have begun to subside in recent weeks, they have forced 70,000 people to leave their homes and caused at least $12 billion worth of damage, more than half of that on farmland.

The cost of rebuilding the levees and the cost of buying land to turn into wetlands are both being calculated.

The new thinking has been driven in large part by the fiscal reality that deficit-conscious Government officials would like to hold down the costs of the cleanup.

A memo sent on Monday that was signed by Katie McGinty, the White House's director of environmental policy, and the Administration's budget office urged Government departments involved in the cleanup to give serious consideration to alternatives to rebuilding levees. The memo said the agencies should consider actions that "could provide greater local benefits of flood control" and "lower long-term cost to the Federal Government and natural resource protection."

The New York Times

SUNDAY, JULY 18, 1993

The Midwest Flooding: Should the Levees Be Rebuilt?

Like Flood, New Policy Could Inundate Levees

By KEITH SCHNEIDER
Special to The New York Times

ST. LOUIS, July 17 — Even as the Mississippi River continues to swamp cropland and force thousands of people from their homes, a debate is taking shape in Washington and the Midwest over whether to rebuild the levees that have washed away or to dismantle some and allow flood waters in the future to cover low-lying areas, effectively turning them into temporary reservoirs.

Two assessments by the Army Corps of Engineers, one completed almost a decade ago and one done this week for The New York Times, found that flood crests in Iowa, Illinois and Missouri would have been two to three feet lower had the river not been confined by hundreds of miles of levees on both sides of the Mississippi.

But the engineers who conducted the assessments also asserted that the volumes of water were so great in this flood that even such levees protecting only cities, the property damage would have been just as extensive.

"I just don't see the big effect that everybody thinks," said Gary Dyhouse, the chief of the hydrology section at the Army Corps of Engineers district office here and the author of one assessment. "The levees have been breached upstream. The flood plain is full of water from bluff to bluff, in some places three and four miles across, and we are still seeing a rising crest in St. Louis."

'Drag on the Economy'

Other experts, though, have taken issue with that analysis of the levees' influence on flooding. Dr. Charles B. Belt Jr., an associate professor of geology at St. Louis University, studied the last great flood that occurred here in 1973, and concluded that the levees pushed the flood waters eight feet higher than they would have been if there had been no levees.

"The corps argues a foot is insignificant," Dr. Belt said in an interview here. "Two or three feet can mean the difference in how much property is damaged. It's a legitimate question whether the Government should put more money into this system of flood protection. Should the Government be subsidizing behavior that is getting more and more expensive? As a scientist, I'm not going to answer it. But as a taxpayer I think it's a drag on the economy."

> Some say levees make floods worse and should be abandoned.

For weeks across this region where the Mississippi River has turned once-placid farm fields into huge and muddy lakes, the debate has been played out in real life. As pressure from conservation groups and others begins to mount in Washington for tearing down some levees, hundreds of residents in south St. Louis and farm families in Quincy, Ill., have been making their opinions known with shovels and sandbags as they work day and night to strengthen levees protecting their property.

At issue in the struggle both on the ground here and in Washington is how to control the Mississippi. The debate will involve economic and environmental factors that played no role 65 years ago when the United States first began to develop the dams, reservoirs and levees that transformed the Mississippi and its tributaries into restricted ribbons of water.

Some See Chance for Change

Undoing parts of that mammoth plumbing system, proponents say, would enable the country to take advantage of the river's natural system for controlling floods at much less overall cost. Levees would not have to be rebuilt at a cost of $1 million a mile or more. And flood damage in the future would be reduced, they contend. Neither the states nor the Army Corps of Engineers yet know the extent of damage to the levees and the total cost of repairing them or removing some.

Most of the levee system between St. Louis and Rock Island, Ill., the region that sustained the most damage, is owned by farmers and other private interests. The Federal Government, though, pays 80 percent of the cost of repairing private levees that fail or are damaged, and the decision of whether to rebuild all or part of the levee system rests primarily with Congress and the Clinton Administration.

Though conservationists and wildlife officials in several states have urged the Government to refrain from rebuilding every levee and allow the energy of floods to dissipate over a wider expanse of land, such a departure in the Government's long-standing response to flooding would also subject farmers to more frequent damage to their land.

That possibility has left farmers and their families in the Upper Mississippi Valley not only battling flood waters but also looking ahead to a political fight none say they want. In Clarksville, Mo., 40 miles north of here, one farmer, Sarah Sterne can look from her porch on a hill and see flood water covering every square inch for miles, including almost half of her family's 1,000-acre farm.

'Doesn't Make Much Sense'

"Our family has been here farming for 50 years," she said. "We have had great benefit from these levees. It stands to reason that if you have crops planted you want to protect them. Families earn their livelihoods out there. Tearing them down or cutting holes in them? That just doesn't make much sense to me."

But that is precisely what some conservationists, independent engineers and state and Federal wildlife agencies are beginning to call for. These experts, who include staff members of the United States Fish and Wildlife Service, contend that the disaster in the Upper Mississippi Valley was made worse by the Government's flood control structures. They argue that the levees hemmed in the river, causing more water to flow through a tighter space, thus causing flood levels to rise much higher than they would had the waters been allowed to take their natural course.

They are calling for levees to be moved farther from the river's edge or dismantled. "The challenge will be for the Congress to say to the Corps of Engineers, 'You must start using the flood plain as an ally in your flood control efforts,'" said Kevin J. Coyle, the president of American Rivers, a 20-year-old river conservation group in Washington. "They need two arrows in their quiver, engineering and nature. The nature part has been sadly missing."

Advocates in Federal Agency

Mr. Coyle and other advocates of the new approach are urging the Federal Government and the states to restore wetlands, develop new riverside parks, establish wildlife refuges and take other measures to develop uninhabited regions in the flood plain to restore some of the Mississippi River Valley's natural capacity to absorb huge amounts of water and diminish catastrophic flooding.

"We don't want to see people moved out of their homes," said Richard C. Nelson, the supervisor of the Rock Island office of the United States Fish and Wildlife Service, which manages refuges along the Mississippi. "But it's worth looking at alternatives that will cost less to maintain and could be more effective in controlling floods."

While causing jitters among farm families and small-business owners across much of the Upper Mississippi Valley, such talk has also led the Army Corps of Engineers to question the validity of the data on which the calls for a new approach are based.

Mr. Dyhouse and his colleague S. K. Nanda, the chief hydrologist at the engineers' district office in Rock Island, readily acknowledge that levees have raised flood levels. In addition, Mr. Dyhouse said that dams and reservoirs on tributaries had withheld enough water to compensate for the extra rise because of the levees.

Late this week, with data from a river gauge in Quincy, Ill., Mr. Nanda did a preliminary analysis of the effect of levees on the flood from Rock Island, Ill., south to Quincy.

Between the two Illinois cities are private levees that protect 360,000 acres of cropland on both sides of the river in Illinois, Iowa, and Missouri. As the flood crest moved downstream, the levees were breached or flooded over. Every time a new field was swamped, the gauge recorded a drop in the river's level, usually two or three feet, Mr. Nanda said. But with the river flowing at 500,000 cubic feet per second, the gauge came right back up hours later when the fields were full of water.

"What that says is that when the Mississippi is screaming fast at these flows, the lands protected by the levees don't mean much," Mr. Nanda said. "They don't have enough storage volume to make a lasting difference."

Mr. Nanda added that he was prepared to take on critics of the corps about the value of levees. "These levee districts protect land that produces good for mankind," Mr. Nanda said. "They don't get flooded every year. Maybe once in 20 or 30 years. That has to be considered. Should we give up entirely all production on this land, making it nothing but swamps? In my thinking, this is a resource to be used to produce food for all of us. Once in a while we'll take the loss."

Boston Sunday Globe

SUNDAY, OCTOBER 3, 1993

FRONT PAGE

Cutting their losses

Weary Midwesterners are ceding their land to the waters

By Michael Rezendes
GLOBE STAFF

ST. LOUIS – As winter approaches the nation's heartland, thousands of victims of the Great Flood of '93 are declaring the rivers the winner in the battle between humans and nature.

The evidence for nature's victory lies in the burgeoning number of Midwesterners who are deciding to pull up stakes, abandon their homes and cede their land to the rivers – leaving a broader pathway for the next flood, whenever it should come.

More than 50 cities, towns and counties have asked to have property "bought out" by the federal government, according to a Federal Emergency Management Agency internal status report. The buyouts – in some cases for flood-stricken neighborhoods and in others for entire towns – would allow landowners to abandon their property to the government, which would raze any structure left standing.

"It's really unprecedented in its scope and its magnitude," said Larry Zensinger, chief of FEMA's public assistance division. "The requests for help in relocation and acquisition are stretching us to the limit in terms of our resources and our ability to deal with them."

The local jurisdictions where officials are planning to move residents out of harm's way span the length and breadth of the nine states constituting the upper Mississippi River basin.

They range fromm Springfield, Minn., where city officials are hoping that the federal government will help buy 13 homes along the Cottonwood River, to Valmeyer, Ill., where citizens recently voted to move more than 300 buildings to higher ground.

Larry Larson, executive director

FLOOD, Page 16

Flood victims cedingland to rivers

■ FLOOD
Continued from Page 1

of the Association of State Floodplain Managers, said that the number of local governments seeking federal assistance for property buyouts could swell to 200, and that more than 5,000 structures could be moved or demolished if federal officials are willing to meet the growing demand.

"That's definitely within the range that's being discussed," Larson said, referring to the bottomland holdings that could be permanently abandoned. "It would be a tremendous number."

Officials believe that thousands of residents may already be in the process of abandoning their homes. In the Orchard Farm School District, which covers a low-lying Mississippi peninsula at the confluence of the Mississippi and Missouri rivers, administrators who anticipated opening classes with 1,450 students had 400 fewer teachers when only 1,100 showed up.

Furthermore, school officials say that 300 of the students now attending classes are living in temporary housing outside the district and may never return to their old homes.

"We usually get most of our students back after a flood, but this time things are different," said district superintendent Guy Van Meter. "We're looking at a permanent loss of 25 percent of the student body, and we haven't hit bottom yet."

For federal officials, an organized effort to move people out of Midwestern bottomlands would represent a dramatic shift in policy. Over the last 100 years, authorities have spent billions on dams and levees designed to protect people and businesses.

But now officials are showing a new willingness to yield to the assertions of independent engineers and environmentalists who have long held that levees can exacerbate the damage caused during extreme flooding by constricting rivers, pushing water levels higher and wiping out underprotected areas downstream.

$12B in property damage

"This is potentially a landmark date in the management of the nation's flood plains," said David Conrad, the water resources specialist for the National Wildlife Federation. "For 60 years, the national policy has been to dam, channelize, divert and levee rivers in order to avoid property losses, but the damages from flooding are increasing all the time."

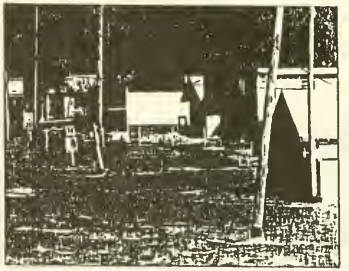
Federal officials estimate that Midwestern flooding this year has caused over $12 billion in property damage in an area equal to one-10th of the 48 contiguous states, and pushed more than 60,000 people from their homes.

Among them are Marvin Hatfield and George Smith, retirees who gathered with friends in the chill of a recent fall morning to watch the Missouri River rush over the roadway leading to the flooded rural outpost of West Alton, Mo.

"I'd say it's time to get the hell out," said Hatfield, who was born and raised in the town of 1,100.

"If I can get a buyout I'm leaving everything," Smith said, sipping at a cup of Salvation Army coffee.

Both men said they were deeply reluctant to leave the town where they had spent the better part of their lives. But they also said that they had lost the will to resist the implacable force of the river.



CLYDE FOSS/MARY BUTKUS

Floodwaters force residents to abandon homes in West Alton, Mo.

As floodwaters throughout the region slowly recede, federal officials, environmentalists and local property owners are finding common ground as they consider allowing farmland, neighborhoods and towns to revert to wetlands – the natural escape for high water during a flood.

Conrad, of the National Wildlife Federation, is looking forward to restored wildlife habitat throughout the region, while St. Louis Alderman Dan Gruen is talking about the possibility of building new parks in the city's flooded Carondelet section. "Open space is at a premium in that area," Gruen said.

Many federal and local officials say that moving people from riverfronts makes common sense, and that buyouts of property owners today will save lives and taxes tomorrow.

But not everyone agrees that government should get involved in an effort to move people from local flood plains.

In the Lemay area of St. Louis County, for instance, residents are divided over a county plan to buy out approximately 80 homes along the River Des Peres and use the area for unspecified recreational uses.

Melody Kirsch, a mother of four whose ranch style house was completely submerged during flooding at the end of July, said she is looking forward to the buyout. "It's three months later, and I've still got dead fish in my back yard," she said.

A plan divides residents

But Kirsch also said she is among the lucky ones. Because she carried flood insurance, county officials have said they will pay her 100 percent of the prefloud value of her home – if the county's application for a federally assisted buyout are approved.

By contrast, uninsured Lemay residents would receive only 75 percent of the value of their homes. And many, especially those carrying heavy mortgages, have voiced strident opposition to the county plan.

"I don't see how we're going to be able to go out and buy another house even with a buyout," said Catherine Burnette, who has spent the last three months with her husband and three teen-age children in a relative's crowded home. "We have no flood insurance and a $20,000 mortgage. I don't know what we're going to do if we're not allowed to rebuild."

Moreover, though county officials say they are optimistic about obtaining federal funds, their efforts highlight the uncertainty that has informed the lives of thousands of increasingly impatient flood victims.

Susan Sedgwick, the county's relocation director, said that formal applications for a federally assisted buyout will not be submitted until later this month, and that homeowners are unlikely to receive payments until late in the spring of next year.

"Takes a master's degree"

At the same time, advocates promoting a massive federally assisted buyout of Midwestern bottomland say that available federal funds are insufficient, and that many local communities lack the expertise needed to assemble funding from a complex array of programs.

"A lot of this stuff practically takes a master's degree in business to figure out," said Scott Faber of American Rivers, a river conservation organization. "We'd like to see the" Clinton "administration send experts from the various agencies to help local officials so we get more money into the pipeline."

The uncertainty surrounding federally assisted buyouts is also reflected in the lives of nearly 100 West Alton families now living in a suburban apartment complex just north of St. Louis.

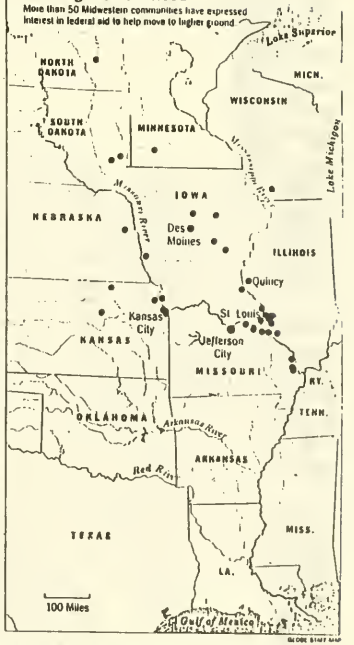
Susan Wunderlich, for instance, is hoping that she and her neighbors will be able to return to their homes and that she might protect her cafeteria job in the Orchard Farm School District.

But Susan's husband, Carl, would rather leave the flood plain, if he could only find a way to finance a move.

"She wants to go back and rebuild, but I'm dragging my feet," he said. "From what I can tell it might be time to move to Canada."

Avoiding the next flood

More than 50 Midwestern communities have expressed interest in federal aid to help move to higher ground.



GLOBE STAFF MAP

ST. LOUIS POST-DISPATCH
FRIDAY, JULY 23, 1993

Rivers Expert Calls For New Flood Plan

Nation's Levees Squeeze Flow, He Says

By William Allen
Post-Dispatch Science Writer

The United States needs a new policy on flood protection, the president of a national river conservation group said Thursday in St. Louis.

"We have national goals for clean air, clean water, even crime prevention," said Kevin Coyle, president of the Washington-based group American Rivers. "It's apparent that we now need national goals to lower flood damage."

The nation's flood-protection policy consists mainly of river engineering and guidelines for development in flood plains, said Coyle, who flew here Thursday morning.

"Looking down on the expanse of water, it's obvious that both of those elements essentially have failed," he said.

Coyle traveled to St. Louis to study the flood and its policy implications. American Rivers, which aims to protect and restore river systems, plans to lobby in Congress for a program that its members feel would temper flooding by better accounting for the natural function of rivers.

On his flight here, Coyle saw vast plains of water where levees had broken and the Missouri and Mississippi rivers had poured through. Coyle has seen the rivers from the air many times — flooded and unflooded.

"It was very clear that the rivers have been squeezed in the St. Louis region by the levee system in place here," he said. "The system is built so strong and high that it holds the river almost in a man-made canyon.

"When you confine the water that used to fan out over the flood plain slowly and come back into the river slowly, you raise the cresting levels. The water runs with more force, and it charges out over the land."

The Army Corps of Engineers built the nation's flood-protection system of levees, dams and other structures for about $25 billion. The corps says the system protects 10 times that much in property.

"But when you get a monster flood like this one, the levee system can actually contribute to the problems," Coyle said. "You have to ask the question: After the taxpayers spent $25 billion on this, does it work?"

Current flood-insurance programs don't do enough to discourage development in flood plains, he said.

Since the federal flood insurance program was adopted more than two decades ago, the number of dwellings built in the nation's 22,000 flood-prone communities has risen by 40 percent, Coyle said.

Coyle said a new national policy should:

- Include better levees in towns and districts whose levees were not built by the Corps of Engineers.
- Let pressure off the levee system in major floods by spilling water into the flood plain in remote areas. Farmers hurt by this measure would need financial assistance.
- Consider measures to lessen constraints on the river where the levee system "pinches the river too tight."
- Overhaul the federal flood-insurance program, placing tougher standards on flood-prone communities.

But Pot Of Buyout Money May Run Dry

By Robert L. Koenig
Post-Dispatch Washington Bureau

Managing Our RIVERS
A Continuing Series

From the Raccoon River to the Mississippi, from the Big Cottonwood to the Big Muddy, three dozen Midwestern towns are considering clearing blocks of flooded buildings from the rivers' path.

If they plunge ahead, those communities would use the most effective, widely endorsed and oldest tool for controlling flood damage: moving homes and businesses away from the flood plain.

The problem is, critics say, the federal and state pot of buyout money is likely to fall far short of ambitious local plans.

Even so, towns and neighborhoods in the Mississippi and Missouri river basins are looking into such plans. For example:

■ In Springfield, Minn., population 2,000, floodwater from the Big Cottonwood struck on Mother's Day, Father's Day and the Fourth of July. But city officials are hoping for a government present by Christmas: as much as $750,000 to buy out 13 flood-damaged homes.

■ In Keithsburg, Ill., town leaders and federal disaster officials are drawing up possible buyout options for 60 flooded homes and a dozen businesses in the town of 1,000. Sharon Reason, whose century-old brick hotel near the Mississippi was swamped with 10 feet of water, said floodwater badly damaged

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Rivers

From page one

14 historic buildings and nearly half of Keithburg's 300 homes.

■ In Valmeyer, Ill., about 20 miles south of St. Louis, most residents voted last week in favor of supporting efforts to move the whole town to high ground. About 60 percent of the town's 346 homes were badly damaged by the Mississippi's floodwater. Officials say Valmeyer is the only town, so far, considering a total relocation.

■ In north Jefferson City (formerly Cedar City), across the Missouri from the capital, officials are debating a proposed city buyout plan to pay 112 homeowners about one-fifth of their homes' pre-flood values. The City Council recently put the plan on hold until Congress decides whether to increase the federal share in buyouts.

"If we're ever going to be interested in creating a more friendly flood area — a park, for instance — then this is the time we need to act," City Administrator Dave Johnston said.

Another community on the Missouri River — the unincorporated Wolcott area of Kansas City, Kan. — also wants buyouts for 32 homes. And Alexandria — in Missouri's northeast corner — is considering buyouts of as many as half of its 125 flood-damaged houses.

Scott Faber, director of flood-plain programs for the American Rivers conservation group, said his survey of Missouri, Illinois, Iowa, Minnesota and five other states hit by the Flood of '93 found more than 40 communities looking into buyout options.

"We're encouraged by the amount of interest so far in clearing the flood plains," Faber said. "But there's a long way to go."

History Of Wariness

If those and other communities actually relocate, they will be following a time-honored tradition. Avoiding flood plains is an issue as old as civilization — and has been a factor for St. Louis settlers for three centuries.

In 1764, Pierre Laclede chose St. Louis' site on high ground west of the Mississippi.

Three years later, when a Spanish general ordered that a fort be built just north of the confluence of the Mississippi and Missouri rivers — near present-day West Alton, Mo. — Capt. Don Francisco Riu rejected the site because it was prone to flooding.

Gilbert F. White, perhaps the nation's leading expert on flood-plain management, said, "Instead of an all-consuming interest in flood control, we ought to be concerned mainly with the wise use of flood plains."

He is interim director of the National Hazards Research Center in Boulder, Colo.

Environmental groups endorse White's assertion. And so do some planners for the Army Corps of Engineers — at least, up to a point.

"Clearly, it makes a lot of sense to move structures out of areas that flood," said Harry E. Kitch, the corps' chief planner. "But totally clearing the flood plain is not feasible. We're not going to move St. Louis, Davenport or Des Moines."

True. But Iowa officials are looking into buyouts and partial relocations of nearly 100 homes in five suburbs of Des Moines, which were flooded by the Raccoon River.

Buyout Limits

If Valmeyer, Springfield, Keithburg and the others follow through on their buyout proposals, they would be following two flood-management pioneers in Wisconsin:

■ Soldiers Grove, a town of 600 that relocated from the lowlands along the Kickapoo River from 1978 to 1983, at a cost of $7 million.

■ Prairie du Chien, which relocated 125 homes in its flood-prone St. Feriole Island ward from 1978 to 1984. The cost: $5 million.

This year, despite interest in buyout plans, the final decisions will likely come down to how much federal, state and local money is made available — and how quickly the buyout packages can be developed.

Critics complain that the government programs are poorly organized and funded.

"We need to tear down the bureaucratic barriers among federal agencies," conservationist Faber said. That's where Congress may come into play.

Rep. Harold L. Volkmer, D-Hannibal, is leading a group of legislators who want to make buyouts easier. Last week, Volkmer and House Majority Leader Richard A. Gephardt, D-St. Louis County, met with Speaker Thomas Foley, D-Wash., to push the buyout idea.

Volkmer's bill would increase the federal government's contributions on "hazard mitigation" buyouts to 75 percent — from 50 percent — and authorize the government to contribute as much as 90 percent of the cost of some relocations.

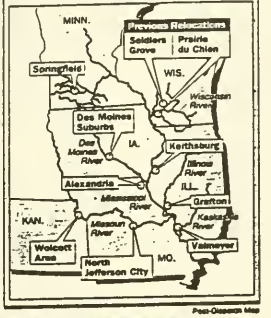
Meanwhile, Sen. John C. Danforth, R-Mo., is drafting legislation to discourage building in flood plains and to increase participation in the flood-insurance program.

And a special White House panel, which includes representatives from all federal agencies involved in the Flood of '93, also is looking at ways to streamline the buyout process and stretch limited federal resources.

"We want to give communities up and down the river every possible way of pursuing alternatives to rebuilding in the flood plain," said Janet Lamb, a FEMA "hazard mitigation" officer now in helping towns in Illinois come up with such plans.

"This is voluntary. We don't tell towns what to do, but — if they want to buy out houses or businesses in the flood plain — we want to give them every opportunity to do that."

Potential Buyout Sites



Post-Dispatch Map

The Philadelphia Inquirer

Sunday, July 18, 1993

Does U.S. bear some of the blame for the flooding?

Dams and levees hold back some problems and create others

One who knows the Mississippi will promptly own that people cannot tame that lawless stream, cannot curb it or confine it, cannot bar its path with an obstruction which it will not tear down, dance over and laugh at.

— Mark Twain
Life on the Mississippi

By Steve Goldstein
INQUIRER WASHINGTON BUREAU

WASHINGTON — Up and down the mightier-than-ever Mississippi last week the hot rumor was that some frustrated Missourian had rammed a levee with his truck, hoping a breach would lessen the flood threat to farms downriver.

The story was apocryphal, but it underlined one of the critical questions of the last two weeks: whether the government's flood-prevention strategies have actually exacerbated the effects of the Great Flood of '93.

"Environmental tampering" with the Mississippi, including shoreline development and the construction of dams and levees, has aggravated natural flooding patterns, according to Kevin Coyle, president of the environmental lobbying group American Rivers.

Other experts agree, arguing that one cannot artificially constrict a river and not expect it to try to burst free.

Of course, two months of nearly nonstop rain in the Mississippi basin have produced a once-in-a-lifetime deluge that would overwhelm any flood-control system. Still, does some blame wash up at the feet of the U.S. Army Corps of Engineers, the federal agency that has built 10,500 miles of levees and flood walls nationwide?

Has America over-engineered its rivers and, in the process, put lives and livelihoods at risk that were intended to be saved? Has the national flood insurance program encouraged development in flood-prone areas?

Debate on these questions is expected to affect policies concerning both the engineering of rivers and land use along the shoreline.

The Corps of Engineers points with pride to its dams and levees, which over the years have protected hundreds of billions of dollars worth of property. For decades, officials say, it was these government flood-control projects that made farming and other profitable development along the river possible.

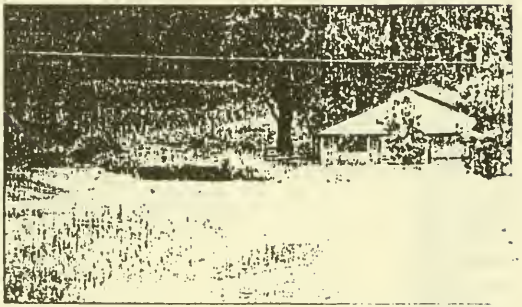
But environmentalists say it's not nice — or smart — to fool Mother Nature.

"In the martial arts, you're supposed to use an opponent's strength to your advantage," said Coyle. "Maybe this is true with nature and flooding, too."

■

With the passage of the 1936 and 1938 Rivers and Harbors Flood Control Acts, the federal government assumed responsibility

See FLOODING on D2



The Philadelphia Inquirer / MICHAEL S. WIRTZ

Flood water from the Missouri River rushes over an earthen dam in Bridgeton near St. Louis. Some environmentalists say such dams exacerbated the flooding

Did U.S. strategies worsen the flooding?

FLOODING from D1

for protecting flood-prone areas.

That responsibility largely devolved upon the Corps of Engineers, which set about building a network of dams and levees in more than 1,000 communities aimed at protecting thousands of square miles of land.

Private groups constructed even more levees, which are earthen dams from 10 to 50 feet high built parallel to a river.

The mission: Protect farmland and the people who work it and live on it.

"When folks have croplands that provide their livelihoods, they'd like to protect it from flooding," said Jimmy Bates, chief of policy and planning for the Corps of Engineers.

He said that the estimated $25 billion spent on these structures had reduced or prevented about $250 billion in property damage, 10 times the cost.

But the flood barriers create problems as well as solve them. High levees along a flood-swollen river squeeze the water into tight channels, where it moves faster, increasing the force of water pushing against the dirt dams and cresting ever higher as it moves downriver.

Coyle calls this "straitjacketing" and says it "transfers upstream flooding problems downstream, with a vengeance."

■

Left to their own, untrammeled devices, flood waters would fan into the natural flood plain, where they would gradually seep back downstream into the river, leaving behind enriched farm soils. Or so environmentalists maintain.

This view leaves Bates exasperated.

"It's one thing to want pristine river systems to exist," he said. "But people who have suffered the loss of livelihoods and lives want protection. So we need a balance."

Coyle argues that we need to "reconnect" the river with the natural flood plain. In the case of the Mississippi, this might mean moving the levees back from the river.

"Remove the levees? That's the $64,000 question," said Steve Quigley, an official of the Illinois Emergency Management Agency. "How many livelihoods are you destroying? You've got hundreds of thousands of acres of the best cropland in the world.

"We're trying to channel the water, and Mother Nature is teaching us a lesson," said Quigley in a telephone interview from Springfield. "Is it worth it in the long run? Ask the people who live on the river."

Quigley pointed out that the levees had provided valuable protection through many lesser floods, and no flood-control effort could cope with this year's record-breaking deluge. He said he had seen a house trailer float down the raging Mississippi the other day, and noted that the flood plain was now seven miles across — more than twice as wide as it has been in previous floods.

"Our levees in Illinois are higher than Iowa's, so they're blaming us for the flooding in Davenport," he said. "But St. Louis built a 52-foot seawall, and they're just watching this thing (the flood) go by."

"The whole thing is like dueling banjos," said environmentalist Coyle. "You build a levee at 20 feet, and someone across the river builds a 24-foot levee.

"Now you get the flood, so you build higher," he said

■

Among the waterways that the American Rivers lobbying group labels as "over-engineered" are the Mississippi ("the biggest plumbing system in the world"), the Ohio and the Susquehanna in Pennsylvania.

"Ever since Hurricane Agnes, there have been a lot of levees and dams built on the Susquehanna from Scranton on down," said Coyle.

Before Agnes hit in June 1972, flood-control devices on the Susquehanna had been designed to cope with what was called a "standard project flood" — essentially, what planners thought was the worst-case scenario.

"But that scenario was topped by a system of conditions that never happened before," Bates recalled. The swollen Susquehanna caused extensive damage in Wilkes-Barre. "So we really never can anticipate the worst that nature can deliver."

Agnes also exposed other weaknesses. After Wilkes-Barre was flooded, it turned out that only two flood insurance policies were in effect in the entire city.

Four years earlier, Congress had enacted the National Flood Insurance Program, which allowed property owners in designated flood-prone areas to buy federally subsidized insurance. To be eligible, communities had to adopt and enforce land-use ordinances and measures to reduce the severity of potential flood damage.

But the eligibility rules were so complicated and the rates so high that few policies were issued.

In post-Agnes 1973, the act was amended to make flood insurance available at heavily subsidized rates for existing properties.

Another amendment required those who suffered property damage amounting to more than 50 percent to be reimbursed — but only after agreeing to rebuild outside the designated flood zone.

Rep. Douglas Bereuter (R., Neb.) wants the federal government to provide incentives for development away from flood-prone zones. He thinks that the 1973 amendments have actually encouraged flood-plain development by making insurance easier to obtain.

Bereuter has introduced legislation that would put an end to repetitive claims in high-risk flood zones. He would raise premiums to reflect true risk. He would roll back much of the subsidy provisions in the 1973 amendments that Bereuter said "made it easier to abuse the program."

"People can build wherever they want, in my opinion, but they shouldn't be protected by a taxpayer-funded entitlement program," he said.

■

Coyle, of the rivers association, wants a policy that rewards communities for keeping flood plains unbuilt. Also, he says, new levees should be used to protect communities, not open farmlands, as the latter will help dissipate the water as nature intended.

A major problem with shoreline development is that residents like to clear the vegetation away to have a better view. This defoliation makes the soil more unstable, and it erodes much more rapidly.

Bates said the Corps of Engineers had been working with communities and developers since the 1960s to keep development out of the flood plain, with modest but increasing success. Still, he said, since the corps doesn't have authority for land-use planning, "it's a local and state responsibility."

As the waters recede, will there be an outpouring of demands in Congress to revisit the nation's flood-control policy?

Or will Congress simply approve President Clinton's relief package, which now contains $65 million for the Corps of Engineers to make repairs to dams and levees?

"There's no question that Congress will go to the Corps of Engineers very quickly about a recovery plan and what to do about future flooding," said Coyle. "A major re-education is needed."

Bates also expects the phones at corps offices to ring, but for different reasons.

"The calls from Congress I would expect are how we can get the water off the people," he said, "and also how to make it so they don't get wet again."

In Illinois, Steve Quigley said he expected that the people who prospered on the river in good times would return.

"There's a really eerie sense when you talk to the locals," he said. "They tell me they'll be back as soon as the water goes down. It's hard to believe the optimism and the resilience.

"'We'll rebuild it,' they say. 'We've done it before.'"

THE CHRISTIAN SCIENCE MONITOR

Monday, August 9, 1993

After the Flood: Officials Look for New Answers

Should flood-plain areas be off-limits to settlement in the future?

By Caroline Nolan
Special to The Christian Science Monitor

WASHINGTON

RIGHT now, in Grafton, Ill., the mayor and the Federal Emergency Management Agency (FEMA) are discussing a plan to move the community's 918 residents to higher, safer ground – permanently.

With the wrath of the flood of '93 being felt in nine Midwestern states, Grafton is not alone. Fifty-foot river crests have left many who call the Mississippi River Valley home wondering if the benefits of living on such rich, fertile land outweigh the possibility that their homes could be destroyed by the water that surrounds it.

Last week, Rep. Richard Durbin (D) of Illinois gave flood-plain residents hope by introducing a bill asking Congress to authorize a federal assessment of flood control along the upper Mississippi.

The United States Congress on Friday passed a $5.7 billion flood relief bill. Agriculture Secretary Mike Espy said the disaster package gives his department $2.7 billion for disaster claim payments, and he promised to have checks in farmers' hands within two weeks of receiving the applications.

Ultimately, Representative Durbin and 13 of his congressional colleagues hope federal funds will provide a more extensive protection system for areas north of the Ohio River, similar to the one Congress constructed along the lower Mississippi after heavy flooding in 1927.

But is protection enough? Though levees, reservoirs, and dams have formed a complex infrastructure system in attempts to control the river's water levels, the past two months have taught flood victims that the weather is, above all things, unpredictable.

"Adding levees to some urban communities would have done some good but most of them already had pretty good flood protection," said Gary Duihouse, chief hydrologist with the US Army Corps of Engineers in St. Louis. "This was just too much for them."

Durbin's bill includes a provision calling for evaluation of flood-plain development. But for the people who already live there, relocation is not a viable choice, the bill's sponsors agreed.

"There's no use thinking about less population in the flood plain," says Rep. Neal Smith (D) of Iowa. "When these things happen, you can't just keep telling people they ought to move."

People should never have been allowed to live in the flood plain in the first place, says Louise Cumfert, a disaster expert at the University of Pittsburgh. "The only way to deal with the problem now is to get people and property out of there," she adds.

But, based on past responses to natural disasters, relocation is highly unlikely, says Saundra Schneider, a law professor at the University of South Carolina in Columbia. "The problems evident now aren't going to be rectified six months down the line," Professor Schneider says.

Environmental groups have long decried population growth in the flood plain, charging that it has destroyed the river's wetlands and left no land to sponge up excess water. The levees constrict the river, squeezing it into man-made boundaries and "creating a false sense of security," says Kevin Dovie, president of American Rivers, a conservation group.

IF the bill passes and Congress authorizes the US Army Corps of Engineers to perform the assessment, rigid environmental laws will have to be considered in making infrastructure improvements. Yet, environmental groups tend to forget that the levee system is often effective, points out Army Corps spokesman George Halford.

"The environment is a large part of our mission, but so is protecting people," Mr. Halford says.

House Speaker Thomas Foley (D) of Washington said last week that he would appoint a commission to consider how flood protection systems can be improved to avoid another disaster of this magnitude. But, as the debate heats up in Washington, people living in the heart of the flood plain are already thinking about rebuilding on the same land they've always lived on.

"FEMA gave us a handbook telling us relocation is one of our choices," says Paul Arnold of Grafton. "But people were born here and they've always lived here. They don't want to move."

USA TODAY
NO. 1 IN THE USA . . . FIRST IN DAILY READERS

WEDNESDAY, JULY 14, 1993

The battered Midwest is facing new threats of more storms and additional flooding that has overrun levees and swamped several river towns. Is only Mother Nature to blame? Some say no.

River tinkering worsened flooding

'Overengineering' by Army Corps with levees, dams and channeling in an attempt to control nature has failed, says river conservation expert.

The problem is not just that it has been raining a lot. This summer's devastating flooding along the Mississippi River is an act of nature made severely worse by more than 100 years of environmental tampering and by public officials who have ignored the river's natural cycles.

The Mississippi — one of the world's largest river systems — has never stayed within its banks and never will. Rivers naturally flow, flood and change their channels.

By Kevin Coyle, president of American Rivers.

Yet, the U.S. Army Corps of Engineers and other public agencies spend billions of taxpayer dollars on dams, levees and canals, arrogantly trying to control nature.

Ironically, this engineering has actually increased flooding problems. And the Mississippi is just one of hundreds of overengineered rivers in the United States.

The flood waters of a river free of dams and levees fan out over adjacent low-lying areas, historically enriching farm soils. Flood plains act as natural sponges: They absorb flood water slowly, release it over time and thus moderate flood surges or "pulses."

Instead of using the flood plain as an ally to reduce flooding problems, the corps and other agencies are squeezing our rivers' natural flow into ever-tighter channels. This straitjacketing causes water to rise higher within levees, prevents it from fanning out, accelerates the river's natural velocity and transfers upstream flooding problems downstream with a vengeance.

The levees lull communities and farmers into a false sense of security, encouraging increased development of the flood plain.

With more structures, the flood plain absorbs less water, and flood damage intensifies. This leads to flooding of nearby communities and threats to water supplies and soils from sewage and chemical contamination.

The victims of this misguided engineering are those who live and work along the rivers. As flooding on the Mississippi continues, cries will be heard for more and bigger dams and levees to fix the problem. As compelling as these arguments will seem in the wake of the personal devastation suffered over the past weeks, we must remember that such "solutions" will only increase flooding the next time around.

What we need to do is reverse this vicious cycle and rethink our nation's dam and levee systems.

One hundred years ago, we could have kept development away from the most flood-prone areas; now, the river system has been so altered that we need new approaches that protect people and property but discourage further development.

By Jeff Roberson, AP

SANDBAGGING: Members of the Illinois National Guard work to build up levee along swollen Mississippi River near Marblehead, Ill., on Tuesday.

This flood should be a wake-up call to Congress, the administration and other elected officials:

▶ Rivers should be reunited with the natural flood plains, when possible.

▶ If levees are rebuilt in the aftermath of a flood, let's put them farther away from the river to allow more room for rising flood waters.

▶ In establishing any new levees, let's give priority to protecting communities rather than open farmland. Temporary flooding of farmland, which helps dissipate water, is preferable to permanent damage to communities and loss of life.

▶ And, it is time to finally have a tougher flood-insurance program that rewards communities for keeping flood plains natural and unbuilt. The national flood insurance program, in its 25-year history, has actually encouraged flood-plain development by assuring that insurance will be available even in flood-prone areas.

Engineers may think they can deny the sheer force of the river. But the Mississippi has set its own boundaries for millennia and will continue to do so. Vice President Gore has promised "a strong, effective, coordinated response" to the flood disaster. Let's hope that, in addition to helping those in need, this response includes the vision to work with the river to avoid future human disasters.

American Rivers

NATIONAL FLOOD CONTROL POLICY -- UNANSWERED QUESTIONS

This document raises key questions about the nation's flood control policies.

<u>There is no one in charge of national flood control policy.</u>

Why is there no comprehensive plan for flood damage control for the Upper Mississippi River?

No single piece of legislation or other authority outlines a comprehensive set of measurable goals and objectives for the nation's floodplain management. At the federal level, there are at least 25 subdivisions of 12 departments and agencies that have some small piece of the nation's flood control puzzle. At the same time, states administer locally adopted and enforced land-use regulations, and local governments oversee local drainage and stormwater management. This subjects the overall issue of flood management to the tyranny of small decisions.

A series of laws, executive orders and directives, administrative regulations, interagency actions and agency policies and programs attempt to thread together all of these flood control efforts. There is no lead agency. The Federal Emergency Management Agency chairs a voluntary interagency task force that reviews the web of programs, policies and regulations but has no authority to make changes. Inconsistencies of purpose, overlaps, gaps, and conflicts persist.

Why aren't public officials working together?

Some of the inconsistencies result from differing attitudes and expectations about the ultimate responsibility and commitment of resources to respond to floodplain problems. Agencies also work at cross purposes: while the Soil Conservation Service fills in headwater wetlands for agricultural and flood control needs, the Environmental Protection Agency advocates wetland preservation to improve water quality. There is little cooperation among the administrators of these federal programs.

Efforts to define a national flood control strategy began in the first half of this century and culminated in the Unified National Program for Managing Flood Losses in 1966. The Program has been revised several times, providing recommendations but basically leaving agencies free to operate as they like. Full coordination

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of the many separate programs that now form the expanded framework does not exist within and between the different levels of government that are involved. There has been neither a single statement of Congressional intent with respect to floodplain management nor a delegation to a single agency responsibility for coordination of the various federal programs.

Management of the water resources functions of floodplains is also at the mercy of a collection of federal programs for water quality and pollution control, watershed management, erosion control, and ground-water protection. The extent and manner to which floodplain management occurs depends on everything from authorizing legislation to the agencies responsible for carrying out legislative mandates. Full coordination of the many separate programs that address water resource functions does not exist within and between the different levels of government.

Our flood control policies create a false sense of security that needlessly puts people at risk.

How have the nation's flood management efforts created a false sense of security?

Levees, dams and dikes can only provide a limited level of protection. A large percentage of private or locally built levees provide an even lower level of protection, as many are poorly designed or maintained. Over time, a levee's history -- and its protective limitations -- are easily forgotten.

Many levees are designed to provide protection from smaller floods, and areas behind levees are often subject to severe internal drainage problems. Even so, floodplain residents often believe they are protected from floods and do not feel they need to take proper precautions. Development may continue or accelerate based on expected flood protection.

Regulations that encourage development of the floodplain also contribute to a false sense of security. Most provisions of federal, state and local tax codes are designed to encourage development without regard to whether it might occur in a flood-prone areas, while relatively few provisions provide incentives to leave land in its natural state. Some jurisdictions offer tax-based incentives that make locating businesses, homes and other development in some flood-prone areas financially feasible and even attractive.

By providing a safety net for landowners who want to build in the floodplain, the National Flood Insurance Program encourages development of flood-prone areas. When the federal government offered the carrot of subsidized flood insurance in flood hazard areas, officials hoped local communities would respond with the stick -- tough restrictions on floodplain development. Instead,

the number of dwellings in the floodplain has increased each year since the program was initiated in 1968.

After limited federal and state education efforts, it is clear that many local officials and property owners still do not thoroughly understand concepts of probability, cumulative impacts, off-site impacts, and functional values -- all of which are important for successful floodplain management. It is also clear that little of the material that has been generated and released adequately integrates the flood loss reduction and natural resources protection aspects of floodplain management.

We need to shift away from overengineering our rivers.

Did the hodgepodge of levees, floodwalls and dams along the Upper Mississippi make the flood damage worse?

The flood waters of a river free of dams and levees fan out over adjacent low-lying areas, called floodplains, that act as natural sponges; they absorb and store water, release it over time, and moderate flood surges. Over 1,250 levees disconnect the Upper Mississippi from its floodplain and force the river's flow into ever tighter channels, causing the water to rise higher and accelerate its velocity. They also raise flood elevations on adjacent upstream and downstream properties by obstructing or accelerating flow or by increasing flood peaks.

Likewise, channel alterations are meant to reduce flooding by increasing the flow-carrying capacity of a stream's channel. But such alterations often result in increased downstream flooding by accelerating the flow of waters. Land management practices that destroy wetlands also increase flooding by reducing the water storage capacity of the land. More than 19 million acres of wetlands, which store water and reduce flooding, have been eliminated from the drainage basins of the Mississippi and Missouri rivers north of St. Louis since the late 1700s.

Dr. Charles Belt of St. Louis University has extensively studied the impacts of environmental engineering on flooding. In a 1975 study comparing a 1973 flood with a 1908 flood where the water volume was roughly equal, Belt and other scientists concluded that the later flood crested eight feet higher. He concluded that the levees were to blame, and found that flood control techniques and the destruction of floodplain wetlands had reduced the amount of water that can fit in the channel by one-third since 1837.

Why aren't we working with nature to manage floods?

Federal and state agencies have consistently sought costly, structural solutions to flood control, spending billions of dollars on the Upper Mississippi. Despite high construction costs and increasing cost-sharing requirements for the states,

only a handful of communities have tried non-structural approaches that reduce flood losses and also protect and restore the natural functions of wetlands and floodplains.

Examples include: the Charles River in Boston, where officials spent $10 million to acquire wetlands rather than spend $100 million on dams and levees; Boulder Creek in Boulder, Colorado and Mingo Creek in Tulsa, Oklahoma, where officials created recreational greenways that double as stormwater detention areas; and Kickapoo River in Soldiers Grove, Wisconsin, where officials relocated the entire business district from the floodplain to an upland site.

Other non-structural alternatives are: land treatment measures that reduce run-off from agricultural lands to streams by improving infiltration of rainfall into the soil, slowing and minimizing runoff, and reducing the sedimentation that can clog stream channels or storage reservoirs; restoration and preservation of wetlands that store flood waters; flood-proofing buildings through increased elevation; and education about flood hazards.

How does the lack of a comprehensive plan affect floodplain management in the Upper Mississippi?

Floodplain management is currently conducted on a segment-by-segment, structure-by-structure basis that does not consider how flood control efforts operate in concert. On the Upper Mississippi, flood control structures may be federal, nonfederal or private. There are 275 federal levees in the region -- those built by the Corps with federal funds to federal specifications -- and more than 1,000 private and nonfederal levees, most of which were either overtopped or ruptured during recent floods. Most of private and nonfederal levees are built and maintained by levee or drainage districts to widely differing specifications and regulations.

The Corps typically considers only immediate upstream and downstream impacts of flood control projects, not basinwide effects. Nonfederal or private levees do not consider basinwide impacts, and have to meet widely varying regulations depending upon jurisdiction. The Soil Conservation Service (SCS) works with state officials throughout the Mississippi River basin to build small watershed flood control projects that typically aid agriculture. Similarly, local SCS officials do not consider the basinwide impacts of flood control projects.

Despite the fact the Corps has spent $25 billion on flood control and have had a flood insurance program for 25 years, per capita flood damage is more than twice as costly as it was before these programs were instituted.

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Has flood control been subordinated to the needs of navigation?

There is growing concern that the Corps is willing to sacrifice the other needs of the river -- flood control, environmental protection, and recreation -- to aid navigation. The levees aid navigation by creating a deep narrow channel, even though flood control may be better served by a wide open channel that remains united with its natural floodplain.

In March, without a request from Congress, the Corps announced that it will spend $33.6 million to study whether to proceed with a $4.8 billion navigation project. It is the most expensive navigation expansion proposal ever considered and would add 1,200-foot locks at up to 16 of the 35 locks and dams on the Mississippi and Illinois river systems. The Corps already spends $80 to $90 million each year to maintain the existing system, and spends roughly half of its annual budget on navigation.

Flood insurance is all carrot and no stick.

Has the National Insurance Program actually encouraged development in flood-prone areas?

The federal insurance program provides landowners with a financial safety net that allows developers to build in flood-prone areas. Under the National Flood Insurance Program, initiated in 1968 and expanded in 1973, the federal government made flood insurance available for property in flood hazard areas in return for enactment and enforcement of floodplain management regulations designed to reduce future flood losses. Insurance against flood losses was generally unavailable before that time. Congress hoped the sale of flood insurance policies would generate the funds needed to offset disaster relief payments, and that lower premiums would act as an incentive for strong local planning.

About 18,000 of the nation's 22,000 flood-prone communities have adopted the regulations needed to join the program but only 2.4 million policies of an estimated 11 million potential policies are in force, despite an average cost of about $300 per year. Lender compliance with the mandatory flood insurance purchase requirements of the Federal Disaster Protection Act of 1973 is less than 20 percent, and real estate agents have no disclosure requirements. The interagency task force concluded in 1992 that only those individuals with the greatest risk actually purchase and maintain flood insurance.

Will this flood require a taxpayer bailout of the National Flood Insurance Program?

The existing premium base is still not large enough to permit the National Floodplain Insurance Program to operate on a fully actuarial basis. This low level of participation has forced the program into a deficit that may ultimately reach $1 billion -- the borrowing authority created for the fund by Congress. As of July 1, 1993, the program had a deficit of $18 million, with thousands of claims still to be paid for damage caused by Hurricanes Andrew and Iniki, and other storms.

The taxpayers have been forced to bail out the program before. In the past, deficits created by borrowing have been covered by appropriations by Congress, not through changes in the program. The Federal Insurance Agency reported in April that Congress spent $1.165 billion between 1981 and 1985 to rescue the fund. Administrators hope that premiums will cover the deficit, but previous surpluses were dependent on dry years. According to the National Weather Center, the nation is entering a 25-year period of increased storm activity.

Are local floodplain regulations being meaningfully enforced?

Effective enforcement of state and local regulations often requires more training, personnel and financial resources than many communities can provide. Moreover, regulations have a limited impact on existing buildings and infrastructure and do not prevent development in floodplains. Resistance to land-use regulations, takings issues, lack of effective enforcement, limited impact on existing buildings, and the failure to stop development or account for future development are all major limitations. While the Federal Insurance Agency has some enforcement powers, communities are only reviewed, on average, once every five years.

About half of the nation's floodplains remained unmapped, and are generally not subject to local regulatory standards. Additionally, about one-third of flood insurance claims were paid for flood damage outside the mapped 100-year floodplain, meaning that dwellings in these areas are covered by federal insurance but are not subject to flood management regulations. Although building standards and regulations have helped reduce damage to some structures, repetitive losses are not discouraged through premium increases nor are the owners of repetitive loss properties encouraged to take steps to reduce future flood losses. The program does not encourage public acquisition of severely flood-prone areas or relocation to upland areas.

Hon. Richard A. Gephardt
Majority Leader
Subcommittee on Water Resources and Environment
House Public Works Committee
October 27, 1993

Mr. Chairman, I applaud and appreciate your hearings on the Midwest Floods of 1993 and your determination to ensure an effective federal response to the nation's second-costliest natural disaster ever.

I also want to thank your subcommittee for authorizing a preliminary flood study for the St. Louis vicinity, which has provided us critical help in beginning a long and difficult rebuilding process. I am grateful for your help.

This summer's record floods produced an agonizing, months-long ordeal, and the litany of hardship and suffering needs little repetition here. Many people are now struggling bravely to mend their lives, even as the threat of new flooding remains.

In Missouri, 13,000 homes were flooded. I would like to share with you some stories that reflect the uncertainty that many flood victims must live with while local governments put their buyout programs together:

In one case, a disabled teamster on a fixed income lives with his eight year old son. The flood water rose to just two feet below the ceiling of their home. With his modest savings, he purchased a small camper from a local charity. But as winter approaches they have had to take temporary shelter at a hotel serving flood victims who cannot afford any other shelter.

An elderly woman on a fixed income of $342 a month lost her home and all of her personal property in the flood. She would like to buy a small home for herself but can't because she still owes $29,000 on the current mortgage.

The father of a low-income family has health problems which have kept him from working over the past year. Although their home was covered by flood insurance it was not enough to pay even the outstanding mortgage. Replacement housing is out of the question until they know whether they will be part of a buyout.

As national media attention has subsided, the need to assist in the rebuilding is greater than ever. Today, unnecessary rules and limits threaten to bog down our relief efforts and keep these people out in the cold. We need swift action to get Midwestern relief back on track.

First we need **more program flexibility**. Thousands of flood victims still face an agonizing, frustrating uncertainty about where and how they can rebuild. Local governments are struggling to understand their options and how they can use federal assistance.

Second, we need a comprehensive flood plan that reduces loss of life and damage from future floods.

STRENGTHEN THE IMMEDIATE FEDERAL RESPONSE

The top priority is to cut through the red tape and provide cost-effective, sensible policies that meet the needs of the flood victims. Giving communities -- and the Federal agencies charged with administering the programs -- greater flexibility will facilitate the rebuilding process.

Floodplain regulations require expensive floodproofing for those whose homes suffered more than 50% damage. Many people simply want to get out of the flood plains and get a new start. Communities are struggling to cobble together resources to offer buyouts. Unfortunately, FEMA funds available for hazard mitigation are limited to only 10% of the funds expended for public assistance or about $4.8 million in Missouri.

The dollar figure for homes destroyed in Missouri, in contrast, now stands at $268 million. These numbers clearly underscore the need for flexibility. If there is any one thing this committee could do to help flood victims, it would be to remove or substantially increase this limit.

Legislation introduced by Harold Volkmer, H.R. 3012, which I have co-sponsored, helps to achieve this. H.R. 3012 also increases the Federal share for hazard mitigation assistance under section 404 of the Stafford Act from 50 to 75 percent.

To give you one example of the need, look at Lemay, Missouri. Lemay is a small community in St. Louis County that was hit hard by the flood. A total of 142 homes were flood-damaged. Of those, 116 received more than 50 percent damage. Sixty-eight homes were insured, a higher-than-average 48 percent. The remaining 74 homes are of high priority for the County's buyout program. To prevent further losses from the next flood, a reasonable buyout program will cost the County over $1 million. Lemay represents **less than 14 percent** of all damage in the County.

Enacting the Volkmer legislation will help people regain certainty in their lives -- and begin a final recovery. Moreover, mitigation makes sense: it will reduce taxpayers' exposure to future disasters.

A second needed change is in the treatment of the Uniform Relocation Act for voluntary buyouts.

The Uniform Relocation Act -- which exists to provide fair compensation to individuals whose property is condemned for roadway and other construction -- may present a burden to communities seeking to use Community Development Block Grant and FEMA funds for <u>voluntary</u> buyout programs. Local governments, which are struggling to maximize their resources for buyouts, have expressed concern that

courts might apply URA to their voluntary buyout offers, dramatically increasing their costs and providing compensation beyond what would be paid to those who purchased flood insurance.

The vast weight of opinion is that the URA does not apply to voluntary flood buyouts. But we need to eliminate any uncertainty in order to speed up the process.

There is a December 1, 1993, deadline in my district for communities to submit their buyout proposals to the State of Missouri. This deadline was already extended once because FEMA was unable to provide lists to the communities identifying those properties which were covered by flood insurance. Further delay is not acceptable.

We've sought regulatory clarification for three months. Nothing has happened. As a result I am urging legislative language to remedy this problem. The uncertainty of federal regulations should not be a partner with the flood waters in victimizing those who have already lost their homes and whose future remains in a state of suspended animation.

We simply need to clarify that the local government use of federal funds for voluntary buyout offers in flood-ravaged areas -- where there is no condemnation -- does not trigger an act intended to protect those facing the exercise of eminent domain.

ENACT A LONG-TERM STRATEGY

We also need a long-term strategy to prevent future losses, not only by building levees, but by moving vulnerable homes out of floodplains, where this is most cost effective.

Floodplain management will require a coordinated strategy by the federal government. House Banking, for example, is working to reform the federal flood insurance program. Its reforms, which I support, will require broader coverage, thereby increasing the program's actuarial soundness. The reforms also establish a small fund for long-term mitigation, floodproofing and buyouts. Because at least 9 million homes lie in floodplains, however, this mitigation program by itself is not adequate.

Other federal agencies need to work toward this same goal. The importance of agencies like the Corps of Engineers is paramount. Having worked on flood issues for over a decade, I would suggest two basic points.

First, we need a comprehensive strategy to substitute for what has been the piece-by-piece building of our levee system in the Upper Mississippi.

The river is a single system. Actions in one place to keep water out mean that the pressure elsewhere along the system increases, often with adverse effects on other communities. An anecdotal review suggests that since the early 1950s, when

levees were built nearby along the Mississippi River, the frequency of major flooding at Ste. Genevieve -- which is not protected by an urban levee -- has increased substantially.

Congressman Durbin has introduced legislation, which I have co-sponsored, providing for a long-term comprehensive study of the Upper Mississippi River Basin. This study should consider how to most effectively protect both cities and farms. It should also provide for the protection of historic towns, such as Ste. Genevieve, which has been identified by the National Trust for Historic Preservation as one of the nation's most endangered landmarks.

Second, federal agencies must consider a wider array of flood-mitigation strategies. We must rebuild levees. But we must also think more creatively. Three years ago, at the direction of this committee, the Corps of Engineers performed a flood control study for the City of Festus, Missouri, which has suffered repeated flooding. The Corps determined that there was no viable project. The Corps considered only levees, not alternatives like buyouts.

In my view, the Corps should give full consideration to non-structural alternatives, including relocation. Significantly, the Volkmer legislation, by providing a 25-75 match comparable to that required for new levees, will help level the playing field between structural and nonstructural alternatives and promote objectiveness in the selection of flood control strategies.

Mr. Chairman, this concludes my testimony. I would be happy to answer any 1questions you may have.

Statement Of

ALLEN D. GROSBOLL
EXECUTIVE ASSISTANT TO GOVERNOR JIM EDGAR
CHAIRMAN, FLOOD RECOVERY TASK FORCE
STATE OF ILLINOIS

Subcommittee on Water Resources
Committee on Public Works
U.S. House of Representatives
October 27, 1993

Mr. Chairman, and ladies and gentlemen, on behalf of Governor Edgar and the citizens of Illinois, I am pleased to be here today to address some of the fundamental issues brought forth by the Great Flood of 1993 including what we believe to be the central issue -- hazard mitigation. Governor Edgar has some very strong feelings about these issues and had it not been for the closing days of the Illinois General Assembly's veto session, he would have been here to share them with you personally.

As Chairman of Illinois' Flood Recovery Task Force, I am pleased to express Illinois' support for two bills under consideration today, H.R. 2931 and H.R. 3012. I want to applaud Congressmen Durbin of Illinois and Congressman Volkmer of Missouri for introducing legislation that improves how the federal government responds to disasters like the flood and that rethinks the Nation's approach to floodplain management and hazard mitigation. We believe these bills can prompt positive changes in both policy and process and help prevent future disasters from having such a costly impact on lives and property.

The Great Flood of '93 represents the worst disaster in Illinois during the Twentieth Century. Sixteen thousand citizens were forced out of their homes, 872,000 acres of farm land were flooded, entire communities were inundated, hundreds of small businesses were damaged or destroyed, and, overall, millions of dollars in personal property were lost.

The full resources of the State of Illinois were used to fight the flood in the height of the disaster. Nearly 9000 National Guardsmen were activated and hundreds of prisoners were used in sandbagging and clean up efforts. Tens of millions of sand bags were used and millions of gallons of clean, safe water were distributed to our citizens.

And just as our full resources were dedicated to fighting the flood, today we are committing those same resources to recover from the flood. This has been a difficult, painful experience, but it also provides opportunities -- opportunities to employ the knowledge we gained from the flooding in an effort to reduce the impact it can have in the future. We will lose this opportunity, again, and endure significant hardship in the future, if we respond to the flood by merely repairing and replacing damaged facilities without giving consideration to mitigation.

This is why Congressman Volkmer's proposed changes are so important and deserve serious consideration. This legislation will provide additional funds for hazard mitigation projects under Section 404 of the Stafford Act. Currently, I believe the funds available for mitigation are inadequate. By increasing the 10% mitigation provision to 15%, you will make more funds available for mitigation. And by increasing the federal mitigation share from 50% to 75%, we will encourage and assist communities to move toward mitigation activities.

Mr. Chairman, in the last few months, I have spent hundreds of hours with federal and state officials, municipal and county leaders, and private citizens. There is a clear consensus that we should be encouraging flood plain communities to move from the threatened areas. And similarly there is a sense we should be considering the buyout of critical levee districts and farm lands that are particularly flood-prone.

Although we believe in mitigation and there is considerable support for buy-outs and community relocations, our federal policies do not in fact serve to encourage these outcomes. In fact, I believe we actually have disincentives in federal law. Federal requirements, hoops, and time-lag all join together to make mitigation an unappealing and often unavailable option for flood victims.

Congressman Durbin and Congressman Volkmer each are proposing measures that head us in the right direction. We agree with Congressman Durbin that the Mississippi River needs to be studied. The effectiveness of our existing system of levees should be re-examined so that our finite resources are more efficiently spent. Would the abandonment of some agricultural levees help the overall system and provide effective wetlands to abate future flooding? If so, what levees and lands should be targeted? Conversely, which levees should be our highest priorities? We applaud Congressman Durbin's efforts to answer these questions.

We also believe Congressman Volkmer's bill is critical. If we have a concern about the legislation, it is that it does not go far enough, fast enough.

Rather than discussing relaxing some of the limitations on mitigation funds, we should be asking what is the function and the effect of these restrictions in the first place. Should we not be discussing how to increase incentives for communities to move instead of merely raising existing limitations?

I hope the Durbin and Volkmer initiatives succeed, but I also hope they result in a broader discussion about of our flood recovery strategies. Let me mention a few examples of how we send mixed messages.

Illinois flood communities are receiving 90% federal reimbursement in Public Assistance funds to repair or replace infrastructure facilities affected by the flood. If a community wants to move out of the flood plain to high ground, one would assume the Public Assistance funds could be applied to new facilities. After all, this would be consistent with our consensus that such moves are good. In actuality, we penalize the community by removing 10% of their available federal Public Assistance dollars. Please, let's give consideration to removing such penalties.

My question is why aren't we substituting financial incentives to encourage mitigation to replace this 10% penalty provision. In the long run, such financial incentives could be offset by the avoided costs associated with the next flood.

When the six billion dollar flood package was passed by the Congress and signed by the President, it included funds for many agencies to carry out chores related to flood recovery. But I don't believe any single federal agency was specifically directed to move communities nor was a portion of the budget segmented specifically for this chore. Also, no specific agency was charged with responsibility to buyout levee districts and no line item was established to fund buyouts of farm land.

If we want communities moved, let's be clear -- authorize an agency to work with communities, give that agency a specific mission, provide a funding line-item and then hold that agency accountable. Similarly, we need to do the same thing for farm land and levee districts in the flood plain.

We do have Federal agencies with dollars and they are offering to help communities move. We appreciate these agencies' efforts a great deal, and this commentary is not a criticism of them. Rather, it is my point that these agencies have program requirements and hoops for communities to go through that have nothing to do with the flood.

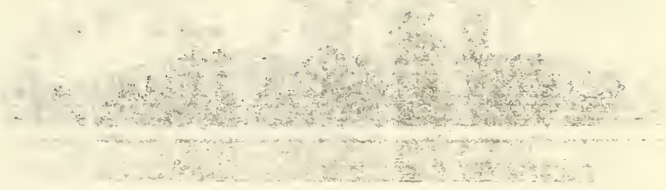
For example, EDA has $200 million available to help communities. But a community wanting to move must prove that the EDA funds will be used to save jobs. Why create that hoop? Let's just be direct about this and say funds are available to help communities move because we want them to move -- not because we will save jobs. This example is typical of the kind of rules and hoops associated with community efforts to obtain flood mitigation funds.

I hope my comments today are not viewed as criticism of the federal agencies involved in this effort. We have had a good relationship. But there are systematic and statutory changes that could further help in the months and years ahead.

Two such measures are before you today. While Congressman Volkmer's bill will provide more funding for much-needed mitigation projects, Congressman Durbin's bill intelligently calls for studies to ensure that these mitigation projects are properly directed and designed. We urge your support of H.R. 3012 and H.R. 2931.

Let me close by expressing Governor Edgar's appreciation for the Congress' support for the Midwestern states ravaged by the flood. The Congress moved quickly and you substantially increased the funds in the flood package. Thank you for your help and thank you for taking time today to consider ways to improve our flood fighting efforts.

Alton Lake Heritage Parkway Commission



Summary
Great Rivers Heritage Corridor
Confluence Floodplain Pilot Project
Alton Lake Heritage Parkway Commission's Recommendations

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Phone
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1. Undertake Bluff to Bluff River Planning
2. Form a Confluence Task Force
3. Enlarge USACE's Riverlands Environmental Demonstration Area
4. Increase the Floodway
5. Offer Floodplain Easements
6. Provide Cluster Relocations
7. Fund Farm Pilot Project
8. Change USACE Lease Policy
9. Re-Direct the USACE'S Mission
10. Construct Melvin Price Visitor Center

This summary of testimony was given to the House Subcommittee on Water Resources and Environment on Wednesday, October 27, 1993 by Annie Hoagland, Chairperson, Alton Lake Heritage Parkway Commission, 3406 Rosenberg Lane, Godfrey, Illinois 62035 (618) 466-4364.

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Greg Welrich

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Alton Lake Heritage Parkway Commission

Subcommittee on Water Resources and Environment
B370A Rayburn HOB

Subject:

Testimony on Floodplain Policies and Post 1993 Flood Proposals

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Introduction

The text of this testimony will basically deal with a specific location at the confluence of the Mississippi, Missouri and the Illinois Rivers, located just 10 miles north of St. Louis, Missouri. Most of the following recommendations refer to flood prevention regarding this specific area, although these recommendations may also be relevant to the entire upper Mississippi and Missouri River Basins.

The Great Rivers Confluence (where the Mississippi, Missouri and Illinois Rivers meet) is the geographic setting for the Land Management Plan that was developed over the past several years for the Illinois General Assembly. After studying the area for two years, the Alton Lake Heritage Parkway Commission (ALHPC) made general recommendations for both Illinois and Missouri as it was impractical for planning purposes to stop at the state line. The Land Management Plan is enclosed, and the recommendations for both states will be discussed in this testimony.

Anne Houghtaling, Chair
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Great Rivers Heritage Corridor

This confluence area would be more aptly named the "Great Rivers Heritage Corridor" (Alton Lake refers to the man-made river pool created by the Melvin Price Lock and Dam #26 on the Mississippi River which extends up river to Dam #25) because three rivers are involved, because it is located in the heart of the country, and because both Illinois and Missouri share in the heritage corridor and the riverine ecosystem of this confluence area. There is no better place in the country to demonstrate nonstructural alternatives for flood control than in the Great Rivers Heritage Corridor. This can be done through a variety of techniques which could be demonstrated in a confluence floodplain project. The following constitute some of these techniques:

1. Undertake Bluff to Bluff River Planning

The Great Flood of 1993 has highlighted the need for long-range planning about management of the Mississippi River floodplain. There should be a holistic, sustainable approach to the whole river from bluff to bluff and from state to state. A beginning point could be to seek increased cooperation between the governments of Missouri and Illinois. One of the most far-reaching recommendations from the Alton Lake Heritage Parkway Commission (ALHPC) was to initiate such a bi-state effort regarding the area at the confluence of the Mississippi, Missouri and Illinois Rivers. ALHPC, an organization authorized by the State of Illinois, has developed a conceptual plan for the Illinois portion of this area. However, a large part of the ALHP viewshed and ecosystem lies within the boundaries of the State of Missouri, making interstate cooperation essential.

2. Form a Confluence Task Force

A conceptual plan for sustainable floodplain management should be developed for the entire confluence area. This area, located in both Illinois and Missouri, comprises roughly 35,000 acres. It extends from the confluence of the Mississippi and Missouri Rivers northwest to the confluence of the Mississippi and Illinois Rivers at Grafton, Illinois and southwest to the St. Charles County bluffline in Missouri. Such a plan should be developed by a consortium of local, state and federal agencies such as the United States Army Corps of Engineers, United States Department of Agriculture, United States Fish & Wildlife Service, Federal Emergency Management Agency, the Missouri and Illinois Departments of Conservation, and a variety of leaders and experts from the community at large. This plan could ultimately be applied to the entire Upper Mississippi River Basin.

3. Enlarge USACE's Riverlands Environmental Demonstration Area

In general, the overall confluence floodplain should remain in

agriculture; however, the peninsula-shaped land southeast from Highway 367 to the juncture of the Mississippi and Missouri Rivers should be eventually phased into some form of public ownership. The goal would be to reclaim this area as wetlands and manage it in conjunction with (perhaps as a part of) the Riverlands Environmental Demonstration area managed by the USACE, which has already achieved national recognition for its pioneering efforts with techniques for re-establishing wetlands.

4. Increase the Floodway

Northwest of Highway 367, every effort should be made to preserve and restore wetlands which are part of nature's own flood control system. (Three hundred thousand acres of wetlands still vanish annually.) If agricultural levees are offered, these should be of a reduced, ten-year height, set back from the rivers so that wetland reforestation can be established near the bank to slow flood water and to provide wildlife habitat. If it were fully funded, the Wetland Reserve Program of the Department of Agriculture's Soil Conservation Service could be used as an incentive to help owners re-establish wetlands.

5. Offer Floodplain Easements

In the confluence area, farming should be managed in accordance with the river's periodic flooding, and with environmentally sound techniques. The government could offer a program of floodplain easements, whereby farm owners would be offered one-fifth of the value of their lands in exchange for their selling a floodplain easement to the government or other appropriate entity. These easements would run in perpetuity and would contain restrictions regarding future use of the property. With a floodplain easement, farmers would continue to own their land, they could farm it, and they could still pass it down to their heirs, but in any event, they would have to abide by easement restrictions that in essence restrict future commercial and residential development.

6. Provide Cluster Relocations

Floodplain easements could prohibit or restrict building or rebuilding structures (such as houses or barns) and storage of expensive machinery on flood-prone land. Owners would be assisted in relocating and clustering structures on higher ground elevations which might be protected by small, circular levees. Easements would require that, with help from experts in farming, economics and environmental planning, owners develop sustainable, environmentally sound plans for their farms. Participating farmers would also be assured of government assistance to cover their production costs in years of flooding so that they could continue to farm in normal years.

This type of management for farming in the floodplains would have several advantages: It would allow farming to continue in normal years and would not interfere with local tax revenues. It would, however, spare owners the misery and financial devastation of flooded houses, barns and loss of equipment. It would also relieve the public of the financial burden of disaster relief for these losses and would allow flood control efforts to be concentrated in heavily urbanized areas in which vital services are more critical. It would also increase the permanent legacy of green, open lands while at the same time creating flood water storage just upstream of the heavily urban St. Louis Metropolitan area. This approach is a natural, sustainable cost effective non-structural way to manage flood-prone areas where there is relatively little development and where populations are sparse.

Several small towns are also located in the Great Rivers confluence area. One of these towns, Grafton, Illinois, has already made the decision, with the help of the University of Illinois, to relocate residential areas where flooding caused devastation. Grafton is asking that FEMA buy out their interests. Many people want to get out of the floodplain and it would seem to be timely to facilitate their moving and thus prevent residential structures from being rebuilt in flood-prone areas. Disaster relief becomes disaster prevention. Several towns have vital services in the floodplain that were severely damaged, and these services need to be relocated to higher ground. The flood line on the trees remains as a reminder of where the rivers rose and will rise again in times of flooding.

7. Fund Farm Pilot Project

To give impetus to the plans proposed above, we would like to identify one or more owners in the confluence floodplain near Highway 367 who would be interested in having their farms used as a demonstration project. Owners willing to participate in the project would be asked to sell easements to the government or a land trust. (The Great Rivers Land Preservation Association, Inc. is legally formed and can technically hold floodplain easements until a government entity can do so, but a national organization like American Farmland Trusts might be a better choice.) Restrictions as described above would be a part of the easement.

Funding for the floodplain easements and assistance with plans and relocation would be provided initially by the grantee or the government in cooperation with various governmental agencies. The success of these pilot farms would then be used to make the case to extend this approach to the entire confluence and to the entire Upper Mississippi River Basin. The government or grantee also should be asked to support a professional coordinator for the pilot project. This individual should have the ability to capture people's imagination and respect, to be viewed as neutral

and fair, and to work with many interests.

This project could have profound effects on national thinking if developed correctly and promoted properly. Many rivers need this kind of thinking and river land research. Because we have Riverlands already, and because we are in the center of the country with three great rivers, it would seem to be a likely place with the needed resources to proceed. Everyone has an interest in controlling flooding and in preserving the environment. If well presented, this program could be embraced by all aspects of the greater community.

8. Change USACE Lease Policy

Hundreds of cabins built on USACE leased land were totally destroyed by the 1993 flood. In the past, USACE has had a policy of allowing these cabins to be re-built along the rivers. This constituted a significant part of the property loss claimed in the 1993 flood. The ALHPC conducted many community meetings at which time the overwhelming majority of people requested that the shoreline be made truly public and not leased to individuals. There was a desire to be able to walk beside the rivers and not have public lands privatized. This would seem to be another opportunity to not re-lease or re-assign leases and instead use the land to increase the floodway and the greenways along the rivers. The USACE needs to go from what is familiar to what is needed presently.

9. Re-Direct the USACE's Mission

On a larger scale, Congress needs to redirect the USACE. The whole focus of the USACE over the past 40 years has been to build flood control structures and assist navigation. While necessary in many places, these objectives are not the complete answer to reducing damage caused by flooding. At times, levees have contributed to the development of floodplains and have actually given people the notion that they were totally protected from the river's fury. Some day, we will have a one in five thousand year flood and like the Yellow River of China long ago, thousands of people could be killed.

In sections 308 to 314 of the Water Resources Act there is language to enlarge the USACE's mission. Congress needs to fund alternatives to traditional structural flood control and high priority needs to be given to these alternatives. The expensive levee system should be prioritized so that we protect only what is essential. Surely in today's world, there is a critical need for civil engineering in lieu of straightening, channeling, draining, and damming our rivers. In fact, the riverine ecosystems are disintegrating and rivers are biologically poorer than ever before. There is a great need to restore the health of the rivers instead of making them run faster to the sea and

choking the Gulf of Mexico.

10. Construct Melvin Price Visitor Center

The Melvin Price Visitor Center needs to be built as a large, educational facility in the center of the country where the USACE explains the floodplain demonstration area at the Great Rivers Confluence. The Mississippi River Heritage Corridor with an enlarged Riverlands could be show cased along with other river research displays regarding the USACE's evolving role in helping to restore the health of the rivers. The types of projects mentioned in this testimony and others could be explained so that the importance of non-structural forms of flood control could be better understood and developed for all rivers around the United States.

This testimony was presented to the Subcommittee on Water Resources and Environment on Wednesday, October 27, 1993 by Annie Hoagland, 3406 Rosenberg Lane, Godfrey, Illinois 62035 (618) 466-4364.

STATE OF ILLINOIS
OFFICE OF THE GOVERNOR
SPRINGFIELD 62706

JIM EDGAR
GOVERNOR

October 8, 1993

President Bill Clinton
The White House
1600 Pennsylvania Avenue
Washington, D.C. 25501

Dear President Clinton:

The Great Flood of 1993 has caused much destruction in Illinois and disrupted the lives of thousands of families. Particularly hard hit have been farmers along the Mississippi and Illinois Rivers. Today, I wish to offer a proposal for your consideration which could help farmers in Illinois and throughout the Midwest.

The Illinois Department of Agriculture and the Heartland Water Resources Council located in Peoria, Illinois have been working with my staff to develop a proposal which addresses many problems. First, we recognize that thousands of farm acres remain flooded today. It will be very difficult for farmers to return to their fields next spring and in some cases it will be impossible. Second, farmers who are back may face problems with the land, resulting in reduced productivity.

A third concern is the uncertainty farmers face on the future status of many of the flooded areas. Potential buy-outs are being discussed, but there is much ambiguity on guidelines and funding sources. Mitigation decisions have not been resolved and will not be until local officials understand the federal programs and available funds. While temporary levee repairs have begun in Illinois, some decisions on permanent levee restoration have not been made.

The proposal I am offering today would authorize the United States Department of Agriculture (USDA) to issue production certificates for the croplands affected by the 1993 flooding. These production certificates could then be offered for sale by the flood-area farmers to farmers participating in the USDA commodity program. With the purchase of such certificates, the farmers unaffected by the flood would be allowed to plant their set-aside acres in crops and still maintain program eligibility.

If properly designed, this program would result in no added costs to the federal government and the taxpayers for farm program payments; however, it would provide significant benefits. Farmers, devastated in 1993 by the flooding of their crops, could receive income next year from the sale of the production certificates. The income would be derived from other farmers, not the United States Treasury. The value of the certificates would be determined by the marketplace, not government controls.

Farmers purchasing the certificates would be allowed to plant crops on their set-aside acres and increase their potential income. Although their production acres would increase, the additional acres would be offset by the acres removed from production by flood-area farmers. There would be no overall increase in production acres in 1994 above what USDA would expect in a normal year.

This proposal would stabilize agricultural production and sales by agricultural suppliers. It would decrease the level of anxiety in the farm community, particularly for farmers waiting all winter not knowing if they will have a crop next year.

The Great Flood of 1993 has presented immense challenges to governments at all levels and to our citizens. We have large recovery tasks to implement and profound policy issues to resolve. It is important that we examine new concepts and consider different ways of looking at our problems.

The production certificate proposal not only offers a way to provide short-term help to flood victims, but it may have application for addressing long-term concerns, as well. The implementation of a one-year program could help us to develop spin-off concepts to address other natural resource protection needs.

Becky Doyle, Director of the Illinois Department of Agriculture and Michael D. Platt, Executive Director of the Heartland Water Resources Council are familiar with this concept. They are available to meet with USDA officials and your staff to discuss the idea.

Mr. President, thank you for your help in responding to the flooding problems in Illinois. I hope the concept outlined in this letter can also help flood victims. Thank you for your consideration.

Sincerely,

Jim Edgar
GOVERNOR

JE:ag

A FLOOD RELIEF OPTION FOR MIDWEST AGRICULTURE

This flood relief option contains the following details:

1. It is based on the transfer of set-aside acres and production acres between individual farm units.

2. It provides for the private sector to fund a significant portion of agricultural flood relief.

3. It maintains production and controls production at the same time.

4. It increases income potential of farmers who participate in the program by purchasing production certificates.

5. On a broad scale, sales by agricultural input suppliers will be generally stabilized.

6. It gives the Federal, State and local governments as well as local levee districts time in reaching a decision about how to handle levee restoration and clean-up.

7. It infuses capital into the flood affected areas thereby supporting local individuals and businesses.

8. It builds a closer relationship between the agricultural and the environmental communities by offering a program both interests can support.

9. Federal farm program payments will not be increased as a result of this program.

GEOGRAPHIC RELOCATION OF SET-ASIDE (ACR) ACRES
AND MIDWESTERN FLOOD RELIEF

The Great Flood of 1993 will be remembered by the citizens of the Midwest as one of the great disasters of their lifetime. In Illinois alone, approximately 18,800 people were displaced from their homes, 1,100 businesses were closed, and 872,000 acres of cropland were destroyed by flooding.

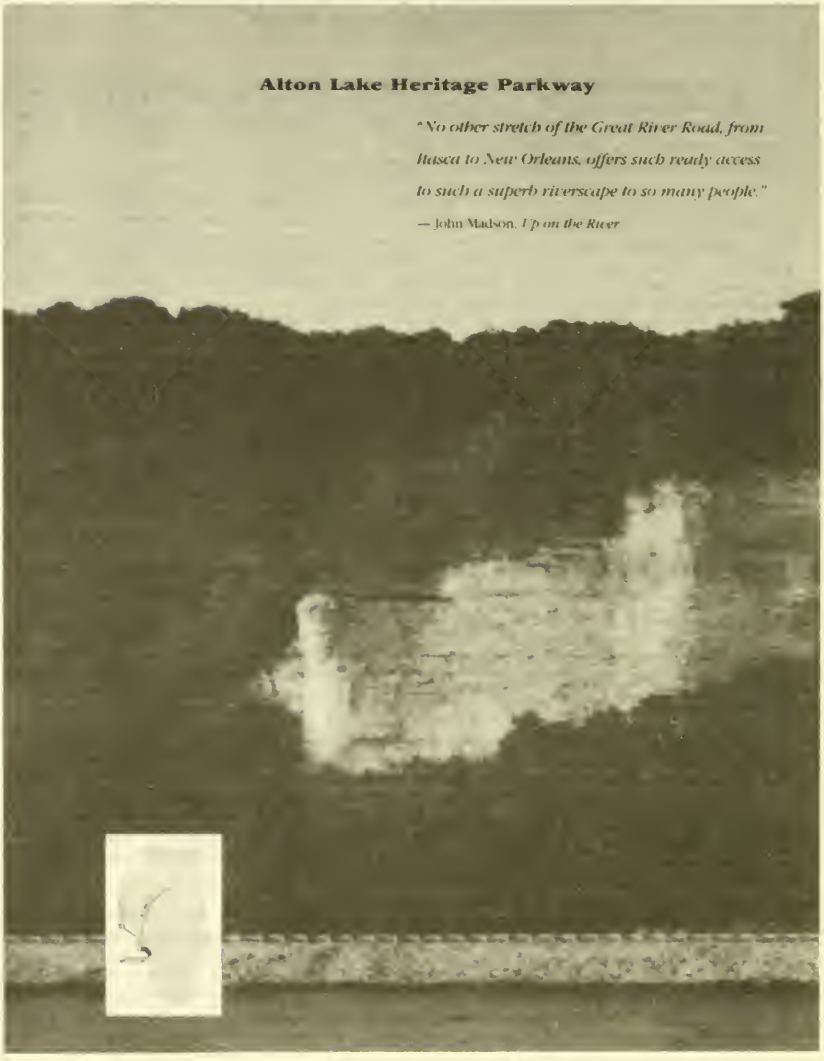
This proposal outlines a method that the federal government could use to provide financial relief to those farmers whose farmland acres will still be too wet or too damaged to plant in 1994. With the exception of minor administrative costs, the proposal would not cost more than the regular USDA Agricultural Conservation Reserve Program (set-aside).

The core concept is to allow flooded farmers to sell their production acres to upland farmers through the exchange of a production certificate. The production certificates would be issued by the U.S. Department of Agriculture to those farms still suffering the effects of the 1993 flood. The production certificates would represent the acreage in production in a normal year. The production certificates could be purchased by farmers participating in the ACR (set-aside) program and would be used to allow them to plant their program set-aside acres. Deficiency payments tied to the acres represented by these certificates would remain with the producer to which the certificates were issued.

By implementing this policy innovation, upland cropland will be brought into production to substitute for production that normally would have occurred in the floodplain. The payment made to the flooded farmer for the certificates provides income from other farmers instead of from a government program. Farmers purchasing the certificates would be financing "flood relief" and would still have the opportunity to produce additional income.

Farmers should be willing to pay the average cash rent in their county for these certificates. Commonly in Illinois, these values could range from $90 to $140 per acre. If there are as many as 300,000 unplantable acres in Illinois next year, then this program could represent as much as 30 to 40 million dollars to those devastated farmers and their communities. Futhermore, this proposal may produce over 40 million dollars additional profit to farmers purchasing the certificates.

In summary, this proposal allows production by producers who are inclined to produce; provides revenue to farmers unable to produce; allows the marketplace to determine value; and represents no significant expense to the government. The program can be devised within the context of existing program structures. And finally, it would ease the financial pain of flooded farm communities.


Alton Lake Heritage Parkway
"No other stretch of the Great River Road, from Itasca to New Orleans, offers such ready access to such a superb riverscape to so many people."
— John Madson, Up on the River

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Confluence Floodplain Pilot Project
Alton Lake Heritage Parkway Commission's Recommendations

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Aldermen
Joe Hutchinson
Ken Gilliland
Bill Hurst
Flo Rowling
Bobbie Amburg
Evelyn Laux

CITY OF GRAFTON

Gerald "Windy" Nairn
Mayor

Treasurer
Melissa Burns

Clerk
Linda J. Brown

Secretary
Sandy Rowling

Testimony to
House Committee on Public Works and Transportation's
Subcommittee on Water Resources & Environment
October 27, 1993

By
Gerald "Windy" Nairn, Mayor
Grafton, Illinois, "A Typical American River Town"

Reference
H.R. 3012

To provide relocation assistance in connection with flooding in the Midwest, and for other purposes.

CITY HALL **GRAFTON, ILLINOIS 62037** **(618) 786-3344** **FAX: (618) 786-3582**

GRAFTON. A HISTORY OF MANY FLOODS

Grafton is located at the confluence of the Mississippi and Illinois Rivers, 40 minutes upriver from downtown St. Louis.

I have lived in Grafton for 62 years. I have been mayor for the past 29 years. Grafton has suffered many floods. Too many. Since 1969, we have been flooded 10 times.

In the past, Grafton has had flood-handling down to a science. City officials and employees knew exactly what to do. The entire town pitched in to move friend's belongings out of their homes. We were well prepared for our "normal" 28 to 30-foot flood that lasted a week or so. But never did we expect a 38-foot flood that would last all summer! It devastated us.

The Summer 1993 flood was five feet higher than ever before. Many homes (including my own) became flooded for the first time ever. During the flood, my wife and I lived in a small, unairconditioned camper for 10 weeks in the hottest part of the summer. Other citizens spent nights in tents, garages, with friends or relatives and even in cars or pickup trucks.

GRAFTON'S POPULATION DROPPED DRASTICLY

Before the terrible flood of 1993 our population count was 918. This summer, 203 of our 383 homes were flooded, causing families to move out of town. Our grade school enrollment fell to 153 this fall compared to 210 last spring.

BUSINESSES CLOSED = TAX REVENUE LOSS

Grafton's only industry is tourism.
During the flood this summer only 3 of our 60 businesses stayed open. The 57 were closed due to water in places of business or lack of tourist traffic. Grafton's Main Street was up to 10 feet deep in water. All outside traffic was cut off, which ruined our tourist season and cost the city $143,000 in revenues (sales tax, amusement tax, etc.). **This loss of tax income means Grafton will be broke by January 1, 1994.**

Floods are very costly to the people in them as well as the cites, counties and states where they are located. They are also very costly to the federal government in the form of flood relief to families, businesses and cities.

We do want to have to come back to Washington and beg for help every time the water comes up. So, we came up with a plan. We are asking for help this one time so we never again need to ask for help.

Grafton was the first flood-damaged town to develop a comprehensive rebuilding plan. On August 20, our plan and accompaning video were mailed to the President, Vice Prisident and several members of Congress. I have brought additional copies for this committee for those who would like them.

HERE IS THE HEART OF OUR PLAN:

Help Grafton recover from the flood of '93 with guidance and funds for the following needs:

1. Remove flood-damaged homes and businesses along the river and turn the property into green space -- parks, beaches, marinas and wetlands.

2. Help our people rebuild and relocate in new homes above the floodplain. We have lost citizens -- we want them back -- they want to come back. Without them, our tax base is greatly diminished.

3. Help us rebuild our infrastructure with new water and sewer plants above the floodplain.

4. Help us build roads roads into town so 85% of our citizens won't be stranded by high water like they were for two months this summer.

5. OUR TOP PRIORITY IS PLANNING ASSISTANCE.
The citizens of Grafton and I simply do not have the expertise to handle what needs to be done day-to-day to obtain government aid grants to help rebuild our town.
Grafton needs a full time KNOWLEDGABLE Project Manager located in Grafton.
The Project Manager must be a person who knows how to deal with the many state and federal agencies for fast action to get Grafton back on it's feet as quickly as possible. We have an empty office in our local bank which is available at no cost.

VICE PRESIDENT AL GORE'S VISIT
Our town was honored on July 13 when Vice President Al Gore, Carol Mosley-Braun, Governor Edgar, James Lee Witt and others visited Grafton and saw, first hand, our town under siege of water -- the most water the Mississippi Valley has seen in 100 years or more. Mr. Gore told us he would help us.
Indeed, we have received some help. Government agencies such as FEMA have been very cooperative with Grafton. Thanks to them we have over 50 FEMA mobile homes in town were flood victims can call home for 18 months while they find homes or sites for a new home out of the floodplain.

But we need a lot more help and we need it now.

We urge Vice President Gore to take Grafton on as a personal project to show how an often-flooded town can be rebuilt above the floodplain and never worry about floods again. **Grafton would like to be the model which, in the future, other flood-prone towns can use for their own rebuilding plans.**

Yes, our town will be broke by January 1st.
The future of Grafton hangs in the balance. We will not be able to pay our police, office staff and maintainance people.

WE NEED IMMEDIATE HELP.
We can't wait until next year to begin planning our rebuilding.
We want to start new home building early next spring.

How can be get help to save our town from bankruptcy NOW!
How can we begin to rebuild Grafton for the future NOW?
How can we obtain a Project Manager NOW?

THE CITY OF GRAFTON AND ITS CITIZENS TRUELY NEED ALL THE HELP YOU CAN GIVE US. IN THE PAST WE HAVE TRIED EVERYTHING TO FIGHT FLOODS -- IT IS TIME WE FOLLOW THE MOST SENSIBLE ROUTE TO THE BEST SOLUTION -- RELOCATION.

PLEASE HELP US NOW AND WE WILL NEVER NEED TO ASK FOR FLOOD RELIEF AGAIN.

PLEASE HELP US FLOOD-PROOF GRAFTON.

We totally support passage of H.R. 3012. It gives towns like Grafton the opportunity to become flood-damage free in the future and lessens local cost-share.

The City of Grafton sincerely thanks this committee for permitting me to present our plight and our plan to you.

FLOOD RELIEF COMPREHENSIVE PLAN
CITY OF GRAFTON, ILLINOIS

August 20, 1993

CITY OF GRAFTON

Gerald "Windy" Nairn
Mayor

August 20, 1993

The President
The White House
Washington, DC 20500

Aldermen
Joe Hutchinson
Ken Gilliland
Bill Hurst
Flo Rowling
Bobbie Amburg
Evelyn Laux

Treasurer
Melissa Burns

Clerk
Linda J. Brown

Dear Mr President:

Like many other towns, Grafton is suffering from the worst flood the Midwest has ever seen. Much of our town is still under water. Most of our 918 citizens are still out of their homes.

We fear that many of our people and businesses will not return unless we have an APPROVED and FUNDED Plan for the future. If a significant number of our citizens and businesses leave the community, our tax base would drop precipitously and Grafton would not be able to recover Therefore, our goal is to save our town. OUR PLAN IS TO ACCOMPLISH THE FOLLOWING THINGS:

1. Provide temporary housing for flood victims in our county so we can maintain continuity for their employment, their schools, their churches and their families.

2. Arrange an orderly government buy-out of the homes not rebuildable.

3. Build infrastructure (roads, water, sewage, utilities, etc.) in the valleys and hills of our town where replacement homes can be built for our people ABOVE FLOOD PLAIN

4. Provide an orderly plan to accomplish goals which people understand, thus avoiding duplication of costs; waste insurance proceeds, government grants. etc.

Enclosed you will find our Plan and a video of what has happened to our town. Although the Plan was developed by our local people and may lack polish and sophistication, it does cover our needs and gives us a direction for the future.

We ask for your consideration of our needs as outlined in the Plan and a quick response so we may take the proper actions in guiding our community over the next few weeks. Thank you for all you have done for those devasted by the 1993 floods. We need your support in making the right decisions for our communities.

Sincerely,

Gerald "Windy" Nairn

Gerald Nairn, Mayor

P.S.: We were honored by a visit to Grafton of Vice President Gore on July 13 who can convey to you first hand the material damage and personal suffering in our community.
C.C.: SPECIAL SUPPORTERS

83 034 329

CITY HALL **GRAFTON, ILLINOIS 62037** **FAX: (618) 786-3582**
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FLOOD RELIEF COMPREHENSIVE PLAN
City of Grafton, Illinois

August 20, 1993

GRAFTON'S GOAL:
To present herewith a well thought out plan for approval and implementation to recover from the Disastrous Flood of 1993.

RATIONALE:
Let's spend the money prudently NOW so that future flood damage costs will be minimal. The current flood has been and will be very costly to the Citizens of Grafton, the City of Grafton, Jersey County, the State of Illinois and the United States government. With a proper plan, the 1993 flood will be the LAST disastrous flood in Grafton's history.

THE CITY OF GRAFTON WILL NOT SURVIVE
UNLESS WE RECEIVE ASSISTANCE

FOR IMMEDIATE PROBLEMS

AS WELL AS LONG-TERM NEEDS.

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1. Survey Results
2. Survey Forms
3. Map of Area
4. U.S.G.A. Army Corps of Engineers Topographical Map (Grafton Quadrangle)
5. Schematic of Grafton's Rebuilding Plan

I. BACKGROUND

1. Introduction

The City of Grafton lies within Jersey County in southwestern Illinois, 15 miles upriver from Alton via the beautiful "Great River Road". Grafton is 45 minutes from downtown St. Louis and 40 minutes from St. Louis Lambert International Airport.

Population: 918
We have 383 households, 60 businesses, four churches and an elementary school. A large number of Grafton residents have jobs in Alton and St. Louis. Others have small businesses in Grafton or are employed in town. We have no manufacturing or industry.

2. Tourism

Grafton's economy relies strongly on tourism. Spring, summer and fall are our busiest seasons.

Grafton area Attractions:

- Visitors come from all parts of the midwest to visit Grafton to enjoy our abundance of Scenic Beauty, Motor Boating, Sailing, Fishing, Hiking, Horseback Riding, Apple Picking, Cycling, Antique and Crafts Shopping and Dining. We also had five bed and breakfast inns within our city limits.

- Pere Marquette Park and Lodge, Illinois' largest and most beautiful state park. This facility attracts families and meeting groups from all over the midwest.

- Raging Rivers Water Park. Now in its third year, this $5,000,000 private investment is our largest employer and is located within our city limits. (Note: Lost 80% of this season due to flood.)

83-034 O - 94 - 7

3. Living and Working Under the Threat of Flooding
Every spring Grafton residents and businesses endure the threat of flooding.

Grafton is unique in that it is located at the confluence of the Mississippi and Illinois rivers and just upriver from where the Missouri River meets the Mississippi.

All three of these rivers affect Grafton.

- When the Mississippi floods, **Grafton is flooded.**
- When the Illinois floods, **Grafton is flooded.**
- When the Missouri floods, the Mississippi is backed up and **Grafton is flooded.**
- When all three of these great waterways are at flood stage at the same time, as in the summer 1993, **Grafton is devastated.**

After each flood, the sturdy folks of Grafton have returned to their homes, cleaned up, repaired and went along with their lives without complaint. But the 1993 flood is different. Many of our homes and businesses will be condemned. Many residents will have no home to return to.

4. Grafton's Flood Plan Accomplishments to Date

Grafton has, during the Devastating Flood of 1993:

(1.) Survived and kept the community together in spirit and in hope.

(2.) Coordinated FEMA, SBA and Illinois Employment Security applications for qualified residents, businesses and employees.

(3.) Surveyed residents and businesses as to emergency and future needs.

(4.) Worked with FEMA representatives to secure temporary mobile home housing for flood victims.

(5.) Begun emergency Road Building for some of our flood-bound citizens. Without these quickly-constructed gravel roads, over 95% of the people of Grafton would have been unable to leave town without taking a boat.

(6.) **Formulated this Flood Relief Comprehensive Plan for Grafton.**

II. INVOLVING THE RIGHT PEOPLE

A. Teamwork

A vigorous schedule of Grafton Flood Committee meetings began during July, 1993 involving:

- Those affected by the flood.
- Interested and related governmental, community, business, not-for-profit and individual parties.
- Anyone willing to work or otherwise contribute.
- Media

A positive, "can do" attitude by everyone involved has promoted a spirit of teamwork and cooperation.

B. SURVEYS

Formal surveys of those directly affected by the flood took place in July and August in order to reach maximum possible consensus on:

- Immediate survival needs
- Transition needs
- Long-term needs
- Flexibility to relocate within Grafton if assisted during the emergency and transition
- Fair buyouts of homes and businesses that are flooded

See Survey Results in Exhibit 1.

III. OVERVIEW OF GRAFTON'S NEEDS

Grafton is grateful for the tremendous help we have received from:

- √ Quarry Township
- √ Jersey County
- √ State of Illinois
- √ Federal Government
- √ Salvation Army
- √ Red Cross
- √ Hundreds of groups, individuals and towns all over America

Grafton's Needs, Today and Tomorrow:

1. Temporary Personal Needs	**$ 3,624,500**
2. Temporary Municipal/Public Systems Needs	**$ 610,000**
3. Temporary Business Needs	**$ 1,540,000**
4. Permanent Personal Needs	**$10,620,625**
5. Permanent Municipal/Public Systems Needs	**$ 10,449,000**
6. Permanent Business Needs	**$ 2,412,500**

TOTAL GRAFTON NEEDS: **$29,256,625**
(Estimated August 20, 1993)

PLUS POSSIBLE ADDITIONAL AMOUNTS: $ _____
(To be determined after floodwaters recede)

IV. DEFINING PERSONAL NEEDS

TEMPORARY PERSONAL NEEDS
The most important immediate needs are Housing and Survival Cash.

1. **Survival Cash**
Grants are needed to pay bills or repay loans to cover ongoing bills and expenses incurred during the flood.

Of the 383 Grafton households, an estimated 80% (306) need assistance. It is estimated $750 is needed monthly for each household for 11 months until rebuilding is well underway.
(306 households x $750 x 11 months): **$2,524,500**

2. **Temporary Housing**
100 mobile homes are needed for temporary housing for FEMA-qualified residents.
(Including cost of developing sites for mobile homes.) **$ 950,000**

3. **Special Assistance**
Funds needed to assist 100 families living with friends and relatives in contributing to utility and upkeep costs (not covered by FEMA and Red Cross programs). On going for 6-15 months until families return to their present homes or relocated homes.
(Estimated $1,500 per family x 100): **$ 150,000**

TOTAL Estimated Temporary Personal Needs: **$3,624,500**

Page 6

LONG-TERM PERSONAL NEEDS

Permanent Housing

1. **Rebuilding Costs***
20% of households are candidates for rebuilding. Estimating cost based on 75% of assessed valuation. **$ 1,412,500**

2. **Relocation/Buyouts**
Approximately 60% of households are candidates for relocation.
Based on 80% of Assessed Value adjusted for apartments and mobile homes. **$ 5,650,125**

3. **Transition Costs:**
Temporary housing, storage and related costs pending relocation. 60% of our 383 household (229) are relocation candidates. Temporary housing costs for 200 households are covered on page 5. 29 homes x $550 per month x 15 months. **$ 239,250**

4. **Other Costs**
Estimated 25%, grants to subsidize development costs, subdivision infrastructure and home loan buydowns to bring homebuyer costs and rent down for HUD low-moderate income qualified community. **$ 3,318,750**

New Homes and Apartments
It is estimated that we will have 229 relocations.
80% New Homes: $55,000 to $75,000 range.
20% Apartments: $25,000 to $35,000 per unit.
Estimated cost range of $15,000,000 to $20,510,000
Cost: **To be paid by owners** **$13,275,000 x 25%= $ 3,318,750**

TOTAL Estimated Long Term Personal Needs:	**$10,620,625**
TOTAL Estimated Temporary Personal Needs:	**$ 3,624,500**
TOTAL ESTIMATED PERSONAL NEEDS:	**$14,245,125**

*** Razed riverfront sites will become green park areas and Parking areas.**

V. DEFINING MUNICIPAL NEEDS

TEMPORARY MUNICIPAL AND PUBLIC SYSTEMS NEEDS

1. Mobile Waste Water Treatment System for use at main Temporary Housing Site, then shifted to new Public Works Site for future overflow and emergency backup use. **$ 85,000**

2. Temporary Repairs to present water and sewer plants after floodwaters recede until new plants are in operation. **$ 50,000**

3. Repairs to Streets and Roads **$ 265,000**

4. Grants to replace lost Sales Tax, Water and Sewer Bill payments and other Municipal revenues to balance Grafton's 1993-1994 budget. This will also provide for uninterrupted Police, Fire, Public Health and other City services. (Estimated **$17,500** monthly for12 months period until Grafton Revenues return to normal.) **$ 210,000**

TOTAL Estimated Temporary Municipal needs: $ 610,000

LONG-TERM MUNICIPAL AND PUBLIC SYSTEMS NEEDS

UTILITIES

1. New Public Works Complex
New five acre Public Works Complex above flood plain located at expanded site of present Water Storage Tanks (for water, sewer plants and maintenance building.) Includes land aquisition and site improvements.
Estimate: $ 185,000

2. Water
New Water Plant, estimated $600,000, less approximately $135,000 available from present HUD/DCCA Grant. **$ 465,000**

3. New Water Wells
Two new Water Wells, $100,000 to $200,000 estimated cost range. **$ 150,000**

4. Eight-Inch Water Line
A new 8" Water Line to tie in to existing 8" Water Line from west end of Grafton through center of city (Trunk Line) to Storage Tanks. **$ 120,000**
(Note: Grant Application submitted to DCCA on June 30, 1993, pending.)

5. Eight-Inch Water Main
A new 8" Water Main from existing 280,000 gallon Storage Tanks to proposed 800,000 gallon Elevated Storage Tank at highest available elevation in Grafton. **$ 200,000**

6. New elevated storage tank (800,000 gallon) **$ 800,000**

7. Sewer
New Sewer Plant at Public Works Site including lift station from present plant location and lines from lift station to new plant.
Estimated Range $1,500,000 to $2,000,000. **$1,750,000**

8. Existing Sewer Line Video Study and Repair
Includes installation of insituform lining for Sewer Lines being infiltrated. **$ 285,000**

9. Streets, Roads, Highways (City, County, State):
(A) Build a series of roads in high areas of Grafton.
The proposed roads will provide:
(a.) Ingress and egress to/from all areas of Grafton.
(b.) Passage to proposed new Public Works site.
(c.) Sites for above-flood level housing and businesses.
Approximately ten miles of roads estimated $550,000 per mile. **$5,500,000**

(B) Raise Highway 100 and Highway 3 at Center of Grafton and Highway 100 at ball field to maximum appropriate Flood Avoidance Level. (Approximately .7 mile) **$ 994,000**

TOTAL ESTIMATED Long-Term Municipal Needs: $10,449,000

TOTAL ESTIMATED Temporary Municipal Needs: $ 610,000

TOTAL ESTIMATED Municipal Needs: $11,059,000

Plus Possible Additional Amounts To Be Determined After Floodwaters Recede $ _____

VI. DEFINING BUSINESS NEEDS

TEMPORARY BUSINESS NEEDS

1. Grants to replace part of net revenues lost due to flood, to cover limited payroll, utilities, taxes, insurance, loan payments or rent, security, preservation and storage costs until business has been rebuilt or relocated and "Normal" revenues have resumed.
(Estimated average $2,000 monthly, 12 month period, 45 businesses.) **$1,080,000**

2. Grants for "reopening" costs, including cleanup of grounds, building, fixtures and equipment, structural repairs, rehabilitation, remodeling, redecorating, rewiring, replumbing, restocking operating supplies and inventory. (Unable to determine until flood waters have receded.) Estimate: **$ 460,000**

TOTAL TEMPORARY BUSINESS NEEDS: **$ 1,540,000**

Plus Possible Additional Amounts To Be Determined After Floodwaters Recede

LONG-TERM BUSINESS NEEDS

1. Relocation
Approximately 50% of our 60 businesses are candidates for relocation. Grants needed are based on latest Assessed Valuations from County Officials for BUYOUTS (Real Property only) of 50% at assessed Value. **$1,070,000**

New Business Locations
Fifty percent of 60 new business locations (30) at $100,000 to $150,000 estimated cost range, total estimated cost range $3,000,000 to $4,500,000.
To be Paid by Business Owner: $3,750,000*

2. Transition Costs
There is a need for grants for temporary locations, equipment and inventory storage and related costs pending relocation. Fifty percent of 60 businesses (30) are relocation candidates. We are estimating six to nine months temporary location and storage, etc. at estimated $1,500 to $2,000 range per business = estimated cost range of $270,000 to $540,000. **$405,000**

3. Other Needs
Target 25% of estimated cost to be provided to subsidize development cost and business loan buydowns to bring business ower's cost down.
*** $3,750,000 x 25% =** **$ 937,500**

TOTAL Long-Term Business Needs: **$ 2,412,500**

TOTAL Temporary Business Needs: **$ 1,540,000**

TOTAL BUSINESS NEEDS: **$ 3,952,500**

VIII. COMMUNICATIONS NETWORK

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IX. EXHIBITS

Exhibit #1. Results of Survey of Residents and Businesses.

Exhibit #2. Survey Forms

Exhibit #3. Map of Area

Exhibit #4. U.S.G.A. Army Corps of Engineers Topographical Map, Grafton Quadrangle

Exhibit #5. Schematic of Grafton's Rebuilding Plan

EXHIBIT #1

FLOOD SURVEY RESULTS

RESIDENTS:
91% of residents With Homes in Flood Water would relocate their homes in Grafton above the flood plain.

BUSINESSES:
76% of residents With Businesses in Flood Water would relocate their homes in Grafton above the flood plain.

Note: Above results based on the following questions and formula:

IF YOU RECEIVE FAIR AND REASONABLE:

1. Financial Assistance During This Flood Emergency
2. Current Home or Business location buyout money
3. Temporary Housing/Business Building Assistance

AND

4. A Special Program for a New Family Home or Business ABOVE the FLOOD PLAIN

WOULD YOU RELOCATE YOUR HOME OR BUSINESS IN GRAFTON ABOVE THE FLOOD PLAIN?

Answer on a scale of 1 to 10 as follows
On a scale of 1 to 10
1 = Absolutely NO, Would not relocate above flood plain.
10 = Absolutely YES, would relocate above flood plain.

Note: Copies of actual filled-out survey forms are available upon request

EXHIBIT 2

COMMENTS FROM SURVEYS

COMMENTS FROM RESIDENTS WITH HOMES IN WATER

"We need a road out of Mason Hollow. We are without sanitation and emergency services, such as fire."

"Relocation would depend on a road exit from Mason Hollow. Emergency help for our senior citizens in government housing is nearly non-existant."

"Undecided about relocation. Would depend on location and whom the neighbors would be, type of utilities, etc."

"We don't want to leave Grafton. We would like to build a new home higher than the flood plain IN GRAFTON."

"I would want to stay in Grafton city limits but out of the flood plain. Somewhere up on top, where orchard is."

"Grafton is home, I do not want to leave the area."

"Need to raise our house. We want to raise our house 5 ft. or more above the highest water crest. We didn't get water in 1973 but now we have over 3 ft. in our home. We need more roads coming into town over the hills so when this comes again we can get out."

"Three ft. or more of water in basement as of July 16, 3 a.m. probably floor damage in basement. Will need extensive clean up and repair. Garage has about 5 or 6 ft. of water."

"Do not want to go back.

"I would want to stay in Grafton city limits, I would like to relocate out of the flood plain."

"We need to find a home in or right outside Grafton. Our business and the school are in Grafton, we need to move back ASAP."

"Good luck, Windy, we're all backing you."

"I would relocate if the property is close to Grafton or in Grafton. I do not want to leave the area."

"Just because we haven't gotten water in our 2nd floor living area does not mean we haven't suffered too. Try living in this mess with no gas to cook, no electric for fans in the 90 degrees plus, 90% humidity, cold water for bathing, mosquitoes and bugs, no air moving."

"I have acreage and want out of this flood mess. Buy me out and I"ll never be paid another flood claim."

"At the moment the river is in patio. At 37 ft. It'll be in our living room. My intentions are as follows: My bluff driveway is much higher than our house. If the water gets in our house, we intend to camp out on our driveway behind our house."

"I'm flexible about relocation so long as it is still in Grafton."

"This is the second time I had to move due to flooding. The first was April 1st, 1993 through June 6, 1993 then just as I got everything back to normal had to move again on July 12, 1993. And I am presently not back in my home. And do not expect to be for at least 2 to 3 months due to water and more damage to my mobile home and damage to mobile home pad and utility hook ups. But if there is a program to relocate within Grafton above flood plain I would most likely do so.'

"We love Grafton And do not wish to move from the city. But I will move to higher ground if ground is available within the city."

"Didn't have water in my house. But due to my physical condition I was not able to boat twice a day to work. I am at the east end with a friend so I can continue to work".

"If the water gets any higher it will be in my home."[It did]

"The flood emergency road has changed our normal peace and quiet. We now worry about the kids getting in the new road. It's a whole lot noisier. It's also been hard not having a grocery store in town to buy little things."

"We moved out as much as we could, we had to leave part of our furniture, etc. We rented Ryder rental truck and drove it out through 2 to 2 1/2 ft. of water. All business equipment etc. was left in business . We are staying with a friend and paying him for staying there."

"Will definately be moving back to our flooded home, but would consider buyout if we could get full appraisal."

"If it wasn't for the summers, Grafton wouldn't be anything. Because of the flood, most of the people in Grafton won't make it through the winter."

"Tried to raise worms to sell. Due to flooding unable to sell any and have lost 85 percent of stock being unable to get feed for them and flash flooding, flooding my basement, killing both pits full of worms. The flash flood would not have been any problem if the river was not flooding. Resulted $6,000 to $8,000 loss."

"Our problem was getting in and out of town for Doctor's appointments and going to the store."

"Need good roads to be used when we are flooded".

"Biggest need is new roads so areas stranded by floods can get in and out. As it is, we are stranded."

SOME COMMENTS FROM BUSINESSES IN WATER

"Will not reopen business in flood plain."

"I need a place for my business in or around Grafton. I need to reopen as soon as possible. Just in business we've lost $6,800.00 not counting personal property loss."

"We had not recovered from loss of business in April and May, 1993. Now with the 2nd flood has added to hardship of previous losses."

"I have been unable to do any business since the water first came up to Main St. intersection. No one needs lawnmowers when under water.'

"Flooding has destroyed our business this year!"

"I AM HOPING TO SELL OUR BUILDINGS OR HAVE THEM BOUGHT OUT AND HAVE THEM USED FOR PUBLIC USES -- LIBRARY, VISITOR'S CENTER, ETC. I BELIEVE THERE WOULD BE A GOOD OPPORTUNITY AT THIS TIME TO PROCURE GOVERNMENT GRANTS TO BUY AND RELOCATE THE PROPERTIES FOR THESE PURPOSES. I AM BEGINNING THE PROCESS PLACING 25 E. MAIN ON THE NATIONAL HISTORIC REGISTER."

"Buy everything that floods over 30 ft."

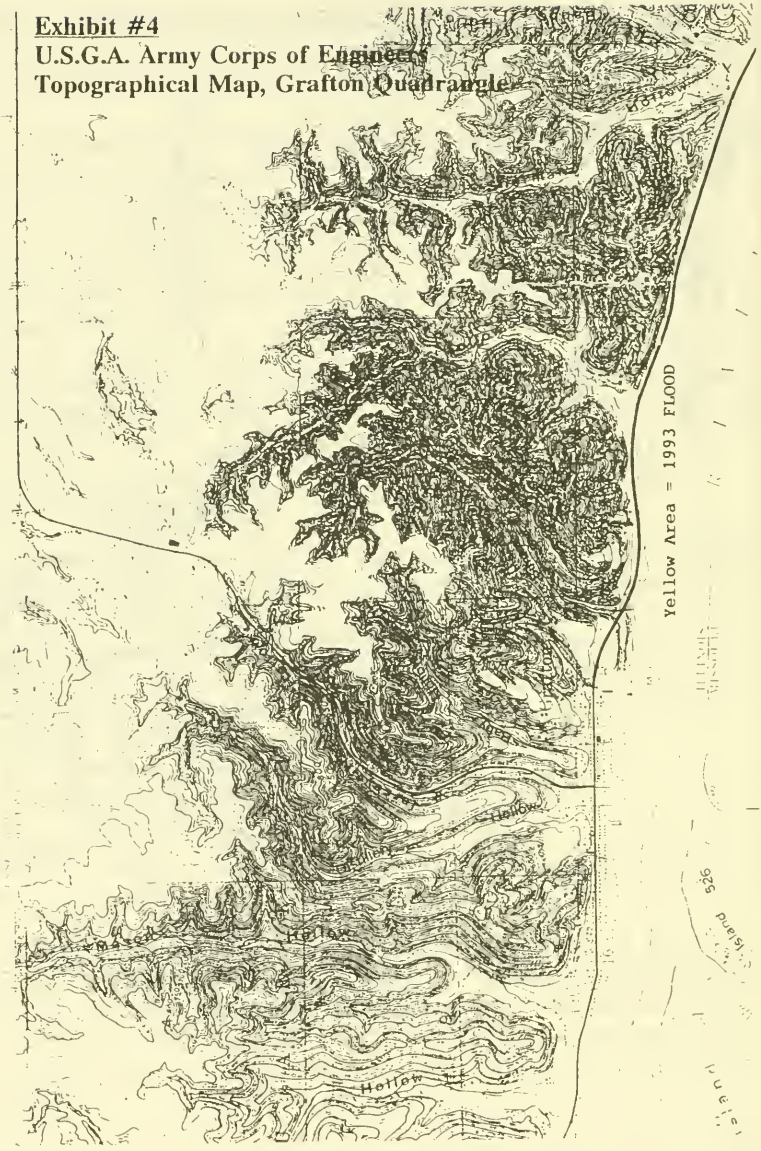
"I'm flexible about relocations so long as it is still in Grafton."

"I would prefer to stay at present location and add 8 ft. to my present building so that all office furnishing fixtures and records would be on a level that would be approx. 40 ft, versus 28.5 currrently. I would only relocate somewhere on the River Road or other main or new roads that could be developed."

"Above flood plain, but customers could not get to us since July 4,1993. Need more roads so Grafton isn't isolated during floods!"

Exhibit #3 Map of area

Exhibit #4
U.S.G.A. Army Corps of Engineers
Topographical Map, Grafton Quadrangle



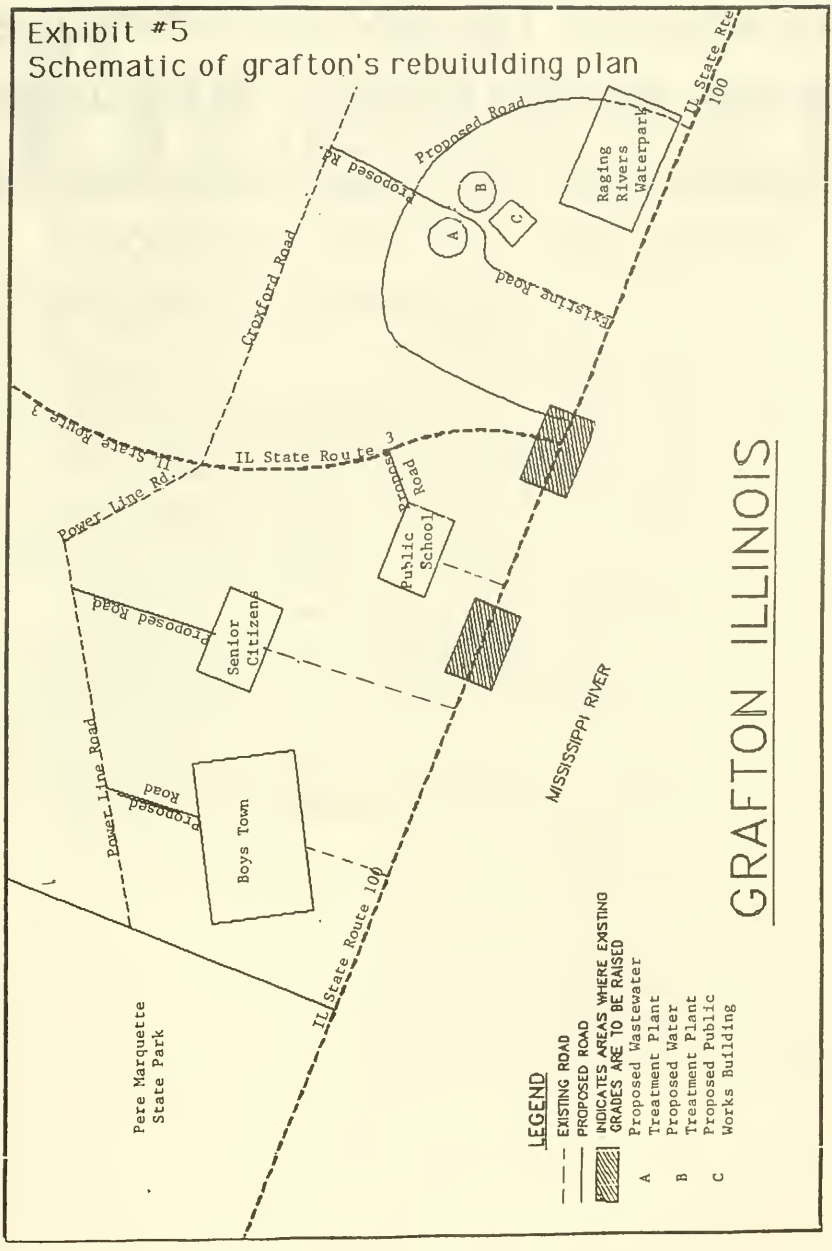


Exhibit #5
Schematic of grafton's rebuiulding plan
Proposed Road
Proposed Rd.
Raging Rivers Waterpark
IL State Rte 100
A
B
C
Existing Road
Crotford Road
IL State Route 3
IL State Route 3
Power Line Rd.
Proposed Road
Public School
Senior Citizens
Proposed Road
Power Line Road
Proposed Road
Boys Town
MISSISSIPPI RIVER
IL State Route 100
Pere Marquette State Park
GRAFTON ILLINOIS
LEGEND
EXISTING ROAD
PROPOSED ROAD
INDICATES AREAS WHERE EXISTING GRADES ARE TO BE RAISED
A Proposed Wastewater Treatment Plant
B Proposed Water Treatment Plant
C Proposed Public Works Building

In midst of big flood, committee plans how to thwart future ones

By TOM BOTT
For The Telegraph 7-27-93

GRAFTON — Though floodwaters will be around for weeks to come, planning has already begun to learn from the disaster.

Grafton's Development and Coordination Committee is putting together a plan to send to local, state and national legislators. The plan outlines changes city officials hope will lessen the severity of any future flooding.

"It is a list of costs to clean up and rebuild Grafton. It outlines the costs involved in the tragedy here. We have people working hard on an extensive plan," said Larry Wright, a committee member.

The plan, which was given the green light by the Grafton City Council at a special meeting earlier this month, includes moving the water and sewer plants to higher ground and constructing more access roads.

"Right now I'd say 99 percent of the city's land mass is out of flood-prone areas, but the people can't get in or out because the River Road is flooded," committee member Scott Adams said.

The tentative plan calls for developing roads going north toward Jerseyville so Grafton residents do not have to rely on boats to get to work or homes.

"We're looking at feeding down from the ridges and valleys, so the main traffic artery feeds from the north and not from the River Road. Most of the ridge tops have roads of sorts, either logging trails or clearings where you can drive a jeep now," Adams said. "The city engineer was impressed by the accessibility."

It will be necessary to purchase rights of way to construct such roads.

"We're looking at a plan so 95 percent of the people will be able to get out," Wright said. "It's inconvenient now. I have to take a john boat. My car is parked a quarter mile up Jersey Hollow."

City officials said they hope to use grant money earmarked for water plant improvements to move the plant to higher ground.

"Each area has its own problems. In Hardin the bridge is out. It's a horrible thing to face not being able to get in or out of their county. In Nutwood, it's the farmers and their crops who have suffered the most," Wright said. "We have a water plant that is shaky and an antiquated sewer plant."

The plan calls for moving the water and sewer plants to a ridge where the water tanks are located.

"It's touch and go at the water plant. The water is almost into the plant. If the sandbags don't hold, we'll have to have water trucked in and pumped into the tanks," said Wright. "Churney (Bradfish, city water director) is a big hero here because of all the hard work he's put in keeping the plant in operation."

Another component of the plan will be asking people who are continually flooded to voluntarily relocate to higher ground in the community. Adams said volunteers are already going door to door asking for comments on the proposal.

"It looks like Venice with all the boats on Route 100. It's sad but amazing how people can adjust," Adams said.

Committee members may make a public announcement of the completed plan Thursday. The information, including a videotape of Grafton, will be sent to legislators.

"We hope by doing it now we can get the attention of people in Washington, D.C. Rather than sit back and wait, we're going after it. The committee is saying act now and ask now," Wright said.

"A lot of towns are stunned, but enough of us have the time to work on a complex plan for the future."

THE TELEGRAPH
AUGUST 18, 1993

Floodwater leaving some towns' budgets in a mess, too

By MAUREEN HEGARTY
Telegraph staff writer

Floodwaters have washed away sales tax revenues for cities along the Mississippi River, causing one to almost sink while others manage to swim.

In the months when store owners in Alton, Elsah and Grafton are usually inundated with tourists, they've just been inundated, forcing them to move merchandise to higher ground and save what they can from their riverside stores.

High water has closed the Great River Road and Raging Rivers, one of Grafton's main tourist businesses. Raging Rivers officials said they will not reopen this season.

"It's stopped everything," Grafton Mayor Gerald "Windy" Nairn said.

Further down the Mississippi, most Downtown Alton merchants had to stop doing business while fighting the flood. Stores are still closed while owners clean up.

But Grafton, which relies heavily on sales and entertainment taxes, probably will suffer most.

"I don't know what we're going to do when cash flow is down and the bills start coming in," Nairn said.

The city gets between $65,000 and $70,000 each year in sales taxes, and about 28 percent of that is collected June through August. It collects about $18,000 annually in entertainment taxes, almost all of which comes from Raging Rivers, which has been shut down for most of the summer.

The April flood also took a bite out of the May revenues, Nairn said. The city operates on an annual budget of about $380,000.

"This season is dead. There is no way it will be cleaned up before fall," Nairn said. "Raging Rivers was only open a month, and it rained most of the time and now it's a heck of a mess."

The cities affected by the flood could see a decrease in property tax revenue as well. Under state law, owners of property in a disaster area can get their assessments cut because of flood damage.

"I don't have any idea what we're going to do," Nairn said. "It's a pretty grim picture. I don't know how many of the businesses we will keep, and I don't know how many homes are still standing. We're in trouble."

Alton's revenue loss should not sink the budget.

"I don't know the specific amount, but while Downtown businesses are important to Alton, their share of the overall sales tax is a small percentage," Mayor Bob Towse said.

"The biggest business down there is Mercantile, and we get no revenue from that."

The city collects about $3.6 million in sales tax yearly for its $19 million budget. Figures for sales taxes collected in June and July will not be available for several weeks.

Sales tax won't be the only revenue loss the city suffers. Lower attendance at the Alton Belle Casino has meant an almost $200,000 hit in the pocketbook. Passengers and receipts decreased nearly 40 percent for July compared with June.

The Belle had 88,367 admissions and a house win of $4.56 million for July, down from 123,885 passengers and about $7.38 million in gambling profits in June, according to the Illinois Gaming Board.

The flood caused city gaming revenues to fall from $493,252 in June to $316,530 in July.

"That's a lot of money, but we were conservative on the amount we projected on the budget," Towse said.

He predicted tourism would be back soon.

"As soon as Downtown opens up there are going to be a lot of tourists wanting to see what we've done and wanting to talk to the merchants about how bad the flood was and what they had to do."

Elsah Mayor Jane Pfeiffer said she is not alarmed about tax revenue losses.

THE TELEGRAPH Fri., Aug. 20, 1993

Grafton sends video to Clinton

By DENNIS McMURRAY
Telegraph staff writer

SPRINGFIELD — Grafton officials are making a videotape pitch to President Clinton asking for government funds to buy out much of Grafton and move the city to higher ground.

"It's a long chance but we're hoping to get some big help out of Washington," said Larry Wright, owner of Grafton's hilltop Tara Point Inn and one of five members of the Grafton Flood Emergency Working Committee that put together the presentation.

City officials have estimated moving most of the residential areas out of the flood plain could cost as much as $25 million.

Wright said copies of the video and 20-page plan are being sent to the president and other federal officials today. Copies also will be delivered today to the six City Council members and they are being encouraged to share them with constituents.

"We want everybody to be aware of the plan and to be upbeat about it," Wright said.

A survey by the committee found "a majority by far of residents and businesses" in areas subject to flooding would move "if they had a chance to be bought out at a reasonable price."

"It's potentially changing an entire town and asking the government to let our people who wish to move to leave the flood plain and relocate in the valleys and hills where this flood didn't reach," Wright added.

Although most of Grafton's territory is out of the flood plain, most of its homes and businesses are not, Wright said.

It appears that several structures are "not going to be rebuildable — they're gone," he said. "When you have water all the way up to the attic for 30 or 40 days, a building is going to be in pretty bad shape."

The 20-minute video was filmed primarily by Wright's nephew, Rich Harper of St. Louis. Harper, one of several volunteers on the project, spent all-night sessions at a donated studio in St. Louis to do the editing, which included some footage shot by Grafton residents.

The script, written by Wright, was narrated on the video by KSD radio disc jockey Joe "Mama" Mason, who also volunteered his services.

Wright said the modest costs for the video were paid from donations.

The video concludes with an interview with Grafton Mayor Gerald "Windy" Nairn and a direct appeal from Nairn to Clinton.

Fifty-two copies are being mailed.

"We're doing our best to let Washington know we have a serious problem here and if we don't get some help this beautiful typical American river town is going to die," Wright added.

The other members of the Working Committee were chairman Scott Adams of Adams Development Co. in Godfrey, Grafton City Council member Joe Hutchinson, Jersey State Bank President Finis Schultz and Larry Smith, manager of Raging Rivers water park.

Nairn said he hoped the video will bring government help. "It shows a lot of Grafton and how it would benefit by being moved up."

Nairn said he and the City Council are behind the plan.

"But the people have to make the decision. We don't know if there would be one, 10 or 500 who would be interested in a buyout and move up the hill."

The community would have to agree to put any area bought out by the government into green space or parking areas, Nairn said.

Nairn said his first major priority is to get the water and sewer plants out of the flood plain.

Moving other parts of the city could take years, he added.

"We hope there will be a flip-flop from the river to uphill but it's not going to be done overnight."

ALTON, ILLINOIS OCTOBER 23, 1993

Grafton must begin planning soon

By SUE HURLEY
For The Telegraph

GRAFTON — Local officials are being urged to speed up their rebuilding plans, necessary for federal flood grant applications, before other flooded towns in the Midwest beat them to the funding punch.

"Valmeyer is actively working with the Regional Planning Commission and has developed a new land use plan," said Randy Strong, a flood mitigation official with the Federal Emergency Management Agency. "The whole idea is for you to do the same. Form your own committees, plan for the future and eliminate problems with flooding."

Strong, speaking at a special city council meeting recently, said that Valmeyer officials met this week with federal flood assistance representatives to discuss the grants they have applied for and will meet in the next week with support agencies to disclose their plan for rebuilding.

"They have purchased 500 acres where they will relocate the residential and commercial areas," he said. "They are moving fast. Residents are even picking out their lots now. When they said they wanted to break ground by March, they meant it."

He added that while all federal grant applications will be considered equally, getting a strong application entered early will increase the chances for a quick response.

Strong said when Grafton plans are being developed, it is important to look ahead into the distant future as well as the immediate one.

"You must look at 20 years from now. It's real important that you put in adequate (sewer and water) lines for future development."

Graduate students from the University of Illinois' architecture program have designed potential land use plans for the city for the reconstruction process based on residents' input and federal flood regulations concerning building in the flood plain.

Larry Wright, administrative assistant to Mayor Gerald "Windy" Nairn, urged council members to be decisive and expeditious.

"The most important committee right now is the (property acquisition committee) to find out what is available," he said. "We can't tell the students if we don't know if we can get the (property) we need."

The council also agreed on the following changes to the proposed city restructuring plan:

■ Construction of a low-to-medium range housing cluster to include townhouses or apartments.

"The idea is to get (displaced) resi-

☐ See GRAFTON, Page A-6

Grafton

■ Continued from Page A-1

dents to stay in the community," Wright said.

■ Construction of a lighthouse to be installed at the river near the junction of Illinois Routes 3 and 100.

"Grafton doesn't have any kind of an emblem to identify it," Wright said. "Aesthetically, it would be great, and it wouldn't cost a lot of money. We might even be able to get it funded by the (U.S. Army) Corps of Engineers, if it can be used as a navigational light for the boats."

■ Construction of a three-block concrete sidewalk on the riverfront.

■ Building a city-owned RV campground with attached playground on the city's west end.

■ Addition of turn lanes at the intersection of Illinois Routes 3 and 100.

■ Building up lower portions of Illinois Route 100 (the city's Main Street) to avoid future closings during times of flooding.

■ Turning the lot on the northwest corner of the intersections of Illinois Routes 3 and 100 into open green space.

■ Construction of a new senior citizens housing complex.

Wed., Oct. 20, 1993 A-7

Grafton likes site for water, waste plants; seeks access

By SUE HURLEY
For The Telegraph

GRAFTON — Officials have pinpointed a potential site for relocation of the water and sewer plants but still have to deal with access during flooding.

The six acres, owned by Scott Adams, president of Adams Development Co., would require a new road, Mayor Gerald "Windy" Nairn said.

He told aldermen Tuesday to be prepared to condemn flood-ravaged properties in the flood plain to build a road.

"If you are going to build, you had better get ready to condemn. You will have to start thinking about this if you're going to move these establishments. The best thing to do is start negotiating (with property owners) and see what we can do."

The city wants to relocate the water, sewer and public works plants to higher ground. Residents were required to ration water this summer because the water plant was close to being shut down by record flooding.

City officials said Adams is willing to sell but a decision to buy has not been made and an estimated cost was unavailable.

Adams said he is willing to make a deal not only for the property needed for the water plant but also additional acreage for development of homes.

"At least this shows that we are willing to work with the city and the engineer," he said.

A major consideration for finding the appropriate water plant site is accessibility during times of flooding.

Nairn said a flood-proof road leading to the plants is vital to getting federal money to pay for the relocation.

"We have to show accessibility," Nairn said "Your grant will go down the tubes if you don't."

The Adams property under consideration is in Buckholt Hollow on the east side of town, Alderman Bill Hurst said. "That's what we decided on as a prime site."

Alderman Flo Rowling said buying the property was important, even if the plants are not relocated at the same time.

"At least we'll have the property. If we don't get it now, it may not be possible to get it later."

Larry Smith, president of Raging Rivers Water Park Inc., said the theme parkneeds another access road so it can stay open during flooding.

The park is the largest employer in town, but most of the jobs are seasonal.

"Surely, the single largest revenue source available to the city merits consideration for a vital roadway link to protect its 225 jobs," Smith said. "Such an access road would have kept us open all but two weeks this year, and even during a flood such as the one in 1973, would not have closed us at all."

Nairn said consideration of a road system to dampen the effects of flooding is a prime goal of city officials.

"We have to come up with a road system. Without roads to get in and out, we'll all be dead in the water," he said. "This is the most important thing in the relocation plan."

10/13/93

Grafton pleads for residents to decide on flood assistance

By SUE HURLEY
For The Telegraph

GRAFTON — City officials are calling for residents' cooperation to complete plans for a proposed flood buyout.

The Federal Emergency Management Agency needs to hear from flood victims as to whether they want to be bought out, have their homes elevated above the 100-year flood level or rebuild at replacement cost.

"We have to tell FEMA how many will be in each program," Zoning Committee Chairman Richard Mosby said Tuesday. "We need to take all this information, figure out the approximate dollar figure of the property and tell (officials) what they need to buy these people out."

About 70 residents have signed up for the buyout plan. At least 40 others have not yet said what they intend to do.

"This must be done first before we can deal with uninsured (homeowners)," Alderman Flo Rowling said.

Mosby said it is imperative that he hear from all flood-affected homeowners.

"As soon as we have names on a list, we can identify properties by legal description, put them on a map and develop a land-reuse program," Mosby said. "This has to be done."

Officials have been asking for residents' input for months.

"We have been telling people for 90 days to come in and tell us what they want to do," Mayor Gerald "Windy" Nairn said. "What we tell FEMA to do is

☐ See GRAFTON, Page A-9

■ Continued from Page A-1

what will happen."

Mosby stressed that even if homeowners put their names on a buyout list, they have the option to back out.

"Up until the day you sign on the dotted line, you can change your mind," he said. "If anybody is even remotely considering being bought out, they should put their name on a list."

Since more than two-thirds of the town's residents were displaced, officials have had difficulty contacting all involved. A public meeting is planned sometime in the next two weeks to discuss homeowner options.

One bit of good news is today's dedication of the FEMA mobile home park on the city's east side.

Workers are putting the finishing touches on 49 trailer pads. Representatives from Gov. Jim Edgar's office will attend the ceremonies.

Statewide, FEMA has 474 mobile homes and 69 travel trailers in place for flood victims, and more are being ordered daily.

THE TELEGRAPH Thurs., Oct. 14, 1993

New mobile homes are castles to Grafton folks

By SUE HURLEY
For The Telegraph

GRAFTON — Pam and Dennis Bick and some other victims of the Great Flood of '93 finally have a home.

State, federal and local officials gathered around the town's recently built trailer court Wednesday for a short, glad-handing ceremony formally opening the long-awaited Federal Emergency Management Agency mobile home park.

"We've been living in a camper trailer, and this looks like a castle compared to that," Pam Bick said after inspecting the trailer.

The Bicks moved into their furnished mobile home after the ceremony. Since early July, they have been living in the camper. Eventually, they said, they will rebuild their severely damaged house on Main Street.

The trailer park on the east side of Grafton at Brown Street just off the Great River Road has 36 trailers and pads for another 13.

☐ See CASTLES, Page A-2

Castles

■ Continued from Page A-1

Most of the trailers are new, and all are furnished, FEMA official Jim Sadler said.

"Some have been reconditioned, but they are comparable to this one," he said from the living room of the year-old model trailer. "They even come with fold-out beds in the couches."

FEMA representative Bland Franklin, countering criticism of bureaucratic delays in building the trailer park, said, "A lot of people said it took too long — three months — to get these trailers here. But it was the site that held things up, finding it and working out the contract for its use. Some trailers were distributed around town at least a month ago."

Mayor Gerald "Windy" Nairn said the next step toward recovery is to move the town's infrastructure out of the flood plain.

"The water and sewer systems and the roads must be moved so that we can get out when it floods again," he said. "We're asking for more than just repairs. We want to get up out of the (water) and get on with our lives."

He told the gathering the flood "has certainly been a tragedy, and everybody knows that. But this town will survive."

Dave Smith, coordinating officer with Illinois' Emergency Management Agency, noted many struggled for four weeks to pull the project together and get families into new homes.

"There were a lot of agencies involved at all levels of the government. What we had to do was get these people into homes as soon as possible while they put their lives back together. That's what we're doing here today."

Smith said there are seven mobile home sites in Illinois. The Waterloo site, home to 150 trailers where residents of flood-ravaged Valmeyer will stay, also opened Wednesday.

Ben Allen, who owns the Grafton land where the trailers are set up, said, "I'm a lawyer, and I deal with a lot of agencies and bureaucracies. I've never seen a group effort come together like this."

Nairn, handing out humor along with thanks to the crowd, told how his office staff accidentally hung up on the White House before Vice President Al Gore's visit in July.

"We were in the middle of an emergency meeting, and we had no idea that the vice president of the United States was going to come here," he recalled, laughing.

"When I came out of (a) meeting, one of the (office volunteers) said to me, 'Yeah, that was a call from the White House and I hung up.'

"The phone rang again ... 'Don't hang up. It really is the White House,'" Nairn quoted the volunteer as saying. "That's how we found out the vice president was coming."

THE TELEGRAPH Thur., Oct. 7, 1993

The Telegraph/RUSS SMITH

Curtis Cooper of Union Springs, Ala., installs stairs and a handrail Wednesday to a mobile home at a FEMA trailer park being constructed in Grafton for residents displaced by the flood.

U.S. trailer site for flood victims nears completion

By SUE HURLEY
For The Telegraph

GRAFTON — Residents still digging out from the flood may soon be moving into new digs.

Construction is nearly completed on the new federal trailer site, on the east end of town and out of the flood plain.

Some workers have spent busy weekends attempting to expedite the opening of the housing area.

"This is an emergency," said Alton attorney Ben Allen, who owns the land. "If we can pay the (National Guard) troops to sandbag 24 hours a day, we can pay these guys to do this. It is not that unusual."

Allen added that heavy rains last week delayed work.

"I didn't think they would ever get it done, because of the rain," he said. "(FEMA) only gave us about 20 days to do this, and we had three or four days of rain last week."

While FEMA is picking up the tab for the mobile homes, the state of Illinois pays for construction.

"For the Grafton group site, the 40 pads were contracted out at $10,900 each," FEMA spokesman Win Anderson said. "That's a total of $490,000, which includes road development, concrete, sewer, water, electric — everything."

Despite the rain delays, Allen said the new mobile home court may open as early as next week.

According to Mayor Gerald "Windy" Nairn, additional mobile homes can be added later, if the need arises.

"If we need more, FEMA would go after them, and we would get more," Nairn said. "We can go up to 60 (trailers) there."

Nairn added that with cooler weather arriving shortly, the need for federal assistance is even greater now.

"The quicker we can get (residents) in here, the better off we are. It's getting to be wintertime, and we need to get them into their houses. We're trying very hard to do that."

The Telegraph/RUSS SMITH

Mary Parks buries her head in her hands Wednesday after she began cleaning up flood damage at her home on Water Street in Grafton. Parks was one of several Grafton residents and business owners starting to move back as flood waters recede.

Statement of Congressman Jim Nussle
October 27, 1993

House Public Works & Transportation Committee
Subcommittee on Water Resources & Environment

Mr. Chairman, thank you for calling this hearing today to address the adequacy of flood control measures along the Mississippi River and its tributaries. The magnitude of the floods in the Midwest this summer was unprecedented. Obviously, several intense rainstorms in the Midwest during late June and early July, along with wet climatic conditions for the preceding six months are said to be the principal causes of the flooding. However, other factors, including certain existing structures, affected the flooding as well. It is estimated that property damage alone from the flood will exceed $10 billion.

Even though the impact of the flood will be felt for a long time in Midwestern states, it is vital we take the time now to discuss how to better deal with a catastrophe of this type in the future.

Congressman Durbin has taken a good first step in introducing legislation that would direct the Army Crops of Engineers to conduct a study to assess the adequacy of current flood control measures on the Upper Mississippi River and its tributaries. I am an original cosponsor of Mr. Durbin's legislation and I support such a study to be conducted by the Army Corps.

In my conversations with my constituents and officials from the State of Iowa, there is a strong appeal for assistance in order to determine what Iowa and other Midwestern state's

approach to flood mitigation should be in the future--meaning as soon as next spring as well as long-term.

In order to address flood mitigation, I believe a thorough study should be conducted by the Army Corps of Engineers, examining the entire Mississippi River with the ultimate goal of providing sound recommendations for future flood mitigation. While this year's flooding occurred mainly along the Upper Mississippi River, flood control measures along the entire Mississippi River should be assessed.

There currently appears to be no comprehensive plan for flood mitigation. The State of Iowa and the other Midwestern states did a tremendous job this summer of tackling the continually rising waters, but in order to do their job better, states believe they could better use their limited resources in conjunction with the federal government if they had better data and a better knowledge of what areas will be impacted by flooding. Right now that data just does not exist.

The technology exists for such a study, but unless Congress provides the authority and the resources, the Army Corps will be unable to properly assess the impact of this year's flood. Such a study would also help states identify areas more prone to flooding, as well as allow towns and communities along the Mississippi River and its tributaries to better prepare for future flooding.

Thank you again Mr. Chairman for holding this hearing.

Testimony Before House Public Works and Transportation
Subcommittee on Water Resources and Environment

The Midwest Floods of 1993: Flood Control and Flood Plain Policy and Proposals

by
Doug Plasencia, P.E.
Chair, Association of State Floodplain Managers
203 Governor St, Suite 206
Richmond, VA 23219

BACKGROUND

Mr. Chairman and members of the Committee. Thank you for providing this opportunity to provide this testimony. The Association of State Floodplain Managers is a professional organization representing the views of over 1800 floodplain managers in the nation. Our members are from all levels of government and the private sector but primarily are state and local government officials tasked with the on the ground implementation of flood protection programs. The Association is dedicated to achieving a national reduction in flood damages. The Association is the leading advocate for the use of non-structural flood protection measures in a comprehensive floodplain management policy.

The Great Midwest Flood of 1993 was an event that focused the nation. Certain areas and regions fared well during this flood, but many areas did not. For those areas that were damaged or destroyed many serious questions were raised. Outside of the floodplain people were expressing frustration at having to once more bail out those they considered foolish enough to live in a floodplain. For those in the floodplain they were devastated to think their levee failed, or that the flooding in their home was worse because some other town's levee pushed the water into their community. And while these views are rather narrowly focused they demonstrate in many ways the shortcomings of our national flood protection and disaster recovery policies. Unless short term and long term changes are implemented in our national flood protection policies the nation will continue to experience escalating flood damages.

This testimony will provide recommendations as it relates first to the flood recovery, and second to recommended adjustments in national flood protection policy.

RECOVERY

The midwest flood recovery has been met with an unprecedented response by the federal government. In the past a normal federal response would have been to restore all damaged buildings to pre-disaster conditions.

The net result being that we simply perpetuated the damage cycle, and assured the need to have to respond at some point again in the future. This recovery has been met by a recognition by many that we need to apply mitigation strategies where feasible, and that we need to carefully evaluate the management of the river basin while utilizing restraint in the repair and restoration of flood control works and infrastructure. We believe that FEMA's leadership in promoting mitigation strategies has been key. We believe that the White House Coordination of multi-agency programs directed towards the recovery has been necessary. We believe the Corps of Engineers and Soil Conservation Service have been highly cooperative in incorporating policies that at times must seem foreign to their traditional flood control programs. In general we see in this recovery the first attempt of the federal government to utilize a comprehensive floodplain management approach.

This flood recovery in certain regards will be a difficult recovery. Agencies are attempting to utilize and blend program resources in ways that may not have been thought of in the past. Communities, hungry to evaluate their options may be inundated either by programs that don't quite meet their needs, or may find several programs in place all with different qualification criteria, cost sharing formulas and other requirements. The recovery effort may find itself bound by program guidelines that make perfect sense during non-disaster efforts, but make little sense during a disaster recovery. The Association of State Floodplain Managers, and the Association of State Wetland Managers jointly developed a list of recommended actions following two meetings co-hosted in the St. Louis area. These recommendations are attached to this testimony.
Over the next several months key adjustment to policy will be necessary to assure recovery success. A few of these changes include:

Passage of HR3012 "Comprehensive Cost Effective Relocation Act of 1993" HR3012 would provide many positive adjustments to the Hazard Mitigation Grant Program of FEMA. The cost share adjustments will bring the cost share requirements in line with FEMA Public Assistance Cost Share guidelines and other flood loss reduction programs. These adjustments will make relocation out of high risk flood zones more feasible for local and state governments to implement.

Data Acquisition Policy decisions are being made in a data vacuum. Yet we are now in an era when the ability to collect and use field data has been greatly augmented by satellite and computer based technologies. There is an immediate need to provide a comprehensive inventory of damaged buildings, damaged infrastructure, impacted lands, and natural areas for conservation and restoration. These data bases than could be incorporated in a comprehensive Geographic Information System (GIS) for the region. The need for this data is now critical for the midwest, but points to an overall lack of data nation wide. Simple parameters such as the number of buildings at risk to flooding in the nation is currently unknown.

Deliver Federal Programs as a Package Currently state and local governments are frustrated because the federal programs are being delivered as independent and uncoordinated programs. There is a need to establish a clearing house where requests for assistance are funneled, and a multi-agency team working with the state or local government match the program or series of programs that will best meet the local needs. This will promote a comprehensive mitigation strategy on behalf of the community, and will encourage federal programs to cooperate and to establish implementation guidelines that are more uniform.

Development of a Comprehensive Watershed Approach for the Upper Mississippi Basin. There is significant speculation and evidence that land use practices and excessive flood control on the river system has exacerbated flooding conditions and other adverse impacts in the basin. To accomplish a comprehensive analysis requires first the development of models evaluating basin hydrology and hydraulics, environmental resources, economic relationships, and other factors.

In tandem with the modeling efforts is a need to develop a policy oversight group. This group should be comprised of local, state, and federal partners. The role of this group would be to examine changes in watershed policy and to commit to the implementation of feasible alternatives. The Chesapeake Bay Compact might serve as a useful example as to how this type of system could be developed.

Encourage Floodplain Acquisition and Restoration Strategies Undeveloped floodplains not only translate into low or no public disaster costs but these areas naturally store flood waters reducing down stream flood damages, serve as buffer areas for non-point source pollutants, and promotes the development of scarce riparian habitats. These strategies support numerous national policies, and should be supported when there are willing sponsors or sellers. Structural recovery programs should examine whether it is cheaper to acquire protected lands or restore damaged levee as part of the decision making process.

ADJUSTMENTS IN NATIONAL FLOOD PROTECTION POLICY

Over sixty years ago the nation embarked on a flood protection program in response to extended and severe flooding on the Mississippi river. The focus of these missions was flood control, and with single minded purpose rivers were channeled, dammed, leveed, and diverted. Little thought was given to the systematic impacts extensive flood control had on a river. Intellectually it was known these systems would be overtopped by floods or that they could fail, but it was hoped to be such a remote possibility that little serious attention was given to this problem.

A few reasoned that we could not rely on a single purpose flood control mission, they also reasoned that we should not encourage floodplain development through flood control, but these voices were little listened to. Until the development of the National Flood Insurance Program in 1968, nation wide alternatives to flood control did not play a significant role in national policy.

In the past twenty five years floodplain management has grown at the state and local level to include fifty states, four territories, and over 18,000 communities. The nation's floodplain managers draw on federal programs that regulate new construction but do very little to reduce flood damages for existing buildings. Because of technical, budgetary, and environmental concerns flood control is not the preferred method of choice by the nation's floodplain managers. We are frustrated with a system that produces studies rather than solutions. We are frustrated with a system that by policy seems incapable of supporting local and state multi-objective needs. We are frustrated with a system where state and local government are too often viewed as incapable rather than as capable partners. The flooding in the midwest is a tragedy, but in of itself is symptomatic of a national flood protection policy that is in serious need of revision.

In 1992 the Federal Interagency Floodplain Management Task Force published Floodplain Management in the United States: An Assessment Report. This comprehensive report provides significant insight into advances in floodplain management technologies and trends. The report generally summarizes how as a nation we are failing to achieve a comprehensive floodplain management policy. The adjustments necessary to achieve this policy would ultimately impact any federal agency involved with public works, community development, disaster response, land management, and natural resource policy. This report should serve as a foundation document when evaluating the status of floodplain management in the nation. Incrementally there needs to be a commitment to pursue these policy changes if in fact this nation is to ever achieve reduced flood damages.

The time is right to consider changes to national policy. It will require the joint efforts of Congress, the White House, and the agencies. Traditional flood protection programs should be examined and updated, other agencies need to be incorporated into our flood protection strategies.

In the past several weeks the Associations of Floodplain and Wetland Mangers jointly sent a letter to the White House that outlined specific adjustments we see as necessary for national flood protection policy. This letter is attached to this testimony and should be viewed as a start rather than as an end. Specific key points included in this letter or developing since we have sent this letter include the following:

Formation of a Floodplain Management Task Force There is an immediate need to put together a task force to evaluate the flood recovery, the national assessment for floodplain management, and necessary changes in federal policy. The White House has discussed the formation of this type of task force. This task force would be best formulated with key agency staff, representative of state and local government as full partners, and other key floodplain management experts.

Re-thinking the traditional federal-state-local partnership. Traditional federal programs were entirely or nearly entirely planned and funded by the federal government. This led to a culture of state and local government being subservient to federal direction. This fostered the belief that flooding was a federal problem, and not a joint problem with state and local government. However today with increased cost-share and increased expertise at the state and local level, no longer should the federal government cast itself in the traditional top-down role.

Communities are faced with an incredible array of problems. They are balancing flooding, water supply, community development, natural resource protection, recreation, and other programs simultaneously. Communities need more flexibility in developing a comprehensive package that usually requires multi-agency participation. Program authorities should be examined to encourage multi-objective planning and implementation standards. In summary there needs to be a fundamental change in the federal flood protection role. This new role must be that to facilitate and to assist state and local government in the implementation of these multi-objective programs.

Develop an enhanced Floodplain Management Policy for all Agencies Many agencies make decisions that encourage or discourage actions in the floodplain. There is a need for those agencies with specific flood protection missions to evaluate whether floodplain management is adequately supported. Too often in these agencies floodplain management is buried in the hierarchy with relatively minuscule budgets resulting in little impact on agency missions and culture. These programs have been highly effective in developing technology advances in floodplain management used nationally, but often times are overlooked by their own agency. The Corps of Engineers Floodplain Management Services Program is an example of a program that has had significant impacts on non-federal flood protection programs. The direct assistance offered by the FPMS program and cost shared studies through the Section 22, Planning Assistance to States Program have been highly useful for state and local government. In the future it will be imperative that the Corps examine an enhanced role for these programs, and that future budgets shift resource towards, rather than away from these programs.

Agencies lacking direct flood protection missions also make decisions impacting our overall inability to reduce flood damages. Grants or projects that encourage floodplain development or encourage agricultural production in the floodplain often time neglect a careful analysis of impacts on disaster recovery needs, and floodplain impacts.

Development Within Lands Protected by Flood Control Following the construction of a flood control project there is often times a rush to develop lands within the protected zone. This greatly increases federal disaster costs during times of catastrophic flooding. There is a need to change this policy and to form a federal policy that discourages development within these protected areas, or requires the purchase of a flood insurance policy based on the residual risk, even if the area is considered "protected" for a given event.

CONCLUSION

The Great Midwest Flood of 1993 was a severe flood. Similar flooding has occurred regionally or within specific river segments on several occasions this century. The damages that were experienced were a shock to many because the nation was convinced that we could control floods. What we learned from this flood however was that a single purpose federal program of flood control could not and will not achieve a sustainable level of protection. That as a nation we need to make major adjustments to our flood protection policies. Lacking these adjustments to national policy we can look forward to increased disaster recovery costs and further degradation of the river environment. Our Associations urge you to begin this assessment now. We pledge our assistance as the Committee deliberates these important issues.

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October 8, 1993

The Vice President
The White House
Washington, D.C. 20500

Mr. Vice President:

Thank you for your letter of August 19, related to the Midwest Flood Recovery. We have found the task force efforts led by T.J. Glauthier and Katie McGinty to be particularly effective. The active role of White House staff has been beneficial for this recovery. The flood recovery has heightened an awareness and brought forward ideas that were long overdue for implementation. Over the next several months, there will continue to be issues that arise out of the midwest needing task force attention, and we will continue to support these efforts.

At this juncture, however, it is critical to begin the long term appraisal you called for in the task force formation. The success of this recovery is in part rooted in strategies that historically have received little policy support from the federal government. Our flood protection policies in the United States are virtually unchanged from fifty years ago when the conventional wisdom was "human mastery of the environment through technology". These flood control dominated policies have not allowed us to master anything; we have merely changed the rules. As with any rule change, there are winners and losers. From the national policy perspective, we have exchanged short term flood protection and increased development in flood prone areas for long term catastrophic flood damages and degradation of the river environment.

As a nation we need to make a choice. Are we going to continue to promote a single purpose flood control policy, or are we going to broaden our flood protection policies to encompass all floodplain management strategies? This is not an issue of new technologies, nor need it be an issue of finding new money. The issue is how do we best encourage our federal programs to move beyond a single purpose flood control policy.

I again urge you to form a federal flood damage reduction policy review group to examine these critical issues. Their charge would be to identify for the administration, potential executive branch and congressional adjustments to flood protection policies and laws. With sufficient support, it is feasible this could be accomplished in a ninety-day period. With this letter are two attachments. The first is an initial list of issues to be examined. The second list is an initial list of professionals that have considerable experience and vision and should be considered as part of this group.

Thank you for supporting these very important issues. I look forward to a continuing and productive working relationship.

Sincerely,

Doug Plasencia
Chair

Larry Larson
Executive Director

Jon Kusler
Executive Director
Association of Wetland Managers

cc: Carol Rasco - Domestic Policy
Kathy Way - Domestic Policy
T.J. Glauthier - OMB
Katie McGinty - Natural Resources

NATIONAL FLOODPLAIN MANAGEMENT POLICY ISSUES

1. Do the economic justification criteria (Principals and Guidelines), provide equal treatment between structural and non-structural project alternatives?

2. Communities are often torn by single purpose, non integrated river management programs. How can multi-objective river management programs be promoted?

3. What are the program authorities that directly or indirectly support flood protection initiatives. Do these authorities sufficiently promote a comprehensive floodplain management approach?

4. Federal agencies in many cases pioneered the technologies and strategies for non-structural floodplain management. Yet these same technologies are little utilized by these same federal agencies. In these agencies, are the floodplain management or non-structural watershed programs buried such that they have limited access or input on shaping agency culture or missions?

5. What is the cost of the extensive project justification scheme in use today? Can these procedures be simplified so as to reduce the dollars spent on producing studies rather than results?

6. Non-structural projects have the ability to be split and staged over time thus allowing states and communities to enter into staged agreements that on an annual basis may be more affordable to the federal and non-federal sponsors. Does the federal system adequately consider this in project formulation?

7. Flood Control will continue to be an important strategy in a comprehensive flood protection strategy. New development in protected areas is greatly increasing potentials for catastrophic losses. Should federal flood control projects be utilized only in fully developed areas, or in an area where the community controls new development within the protected area, such as behind levees?

8. Flood control projects often result in passing waters more quickly onto downstream or cross river communities. Some agencies mitigate for any induced flooding, others for any induced damages. The rational for the latter is that from an economic point of view what is the difference between five feet or six feet of water in a town. How should federal flood control projects deal with induced flooding?

9. Federal engineering manuals are used extensively for flood protection design. These same manuals however contain limited material on flood proofing, elevation and relocation of homes, river restoration, bio-engineering, and other state of the art techniques. Does the lack of information in these design manuals inhibit innovative design within and external to the federal agencies?

10. Federal floodplain regulations have been little adjusted in twenty-five years. The basic standards allow floodplain encroachments that can result in an additional one foot of flood depths in the floodplain. Is this standard still sufficient or has this policy induced additional flood damages on existing structures and allowed new structures to be built that are not being protected to the 100-year flood?

11. Are there adequate safeguards in the post disaster environment to assure that we are not simply going to restore at risk, damaged structures?

12. Do our national infrastructure and agriculture policies inadvertently promote the utilization of floodplain lands, that subsequently creates the need for disaster relief or flood protection solutions?

13. What should a holistic federal watershed program consider? Is it appropriate to continue federal policies that passively promote the management of stormwater runoff, best management practices in riparian zones, and floodplain management as separate policy issues?

14. Many communities are developing well funded districts or utilities to deal locally with flooding and stormwater problems. Are there federal incentives that could be used to encourage these local initiatives?

15. The policies and programs of states often shape the need and the size of a federal response, long before the disaster occurs. States with strong floodplain management standards seem to need less federal relief during times of flood than those with weak standards. Is there appropriate recognition, incorporation and support for strong state programs from the federal government? Are there incentives to be utilized to encourage improved state programs?

Preliminary (October 1, 1993)

Post Mississippi Basin Flood Response, the Mitigation of Future Flood Losses, and the Restoration of Floodplain, Wetland, and Riparian Zones

RECOMMENDED IMMEDIATE ACTIONS BY THE WHITE HOUSE, FEDERAL AGENCIES, AND CONGRESS

Association of State Wetland Managers
Association of State Floodplain Managers

Prepared by

Jon Kusler, Executive Director, ASWM
Larry Larson, Executive Director, ASFM

The following recommendations for immediate actions are derived from two workshops concerning post flood response from the upper Mississippi basin 1993 summer flooding and mitigation of future flood losses. The workshops were jointly conducted by the Association of State Floodplain Managers and Association of State Wetland Managers with a broad range of cooperating organizations in St. Louis, Missouri, August 30-31, 1993 and September 27-29, 1993. These workshops involved over 300 participants from the states, local governments, universities, federal agencies, and interest groups. The first workshop focused generically upon post flood response and mitigation of future losses. The second focused more specifically upon postflood response and the restoration of floodplain, wetland, and riparian areas.

The goals of the workshops were to assess post flood responses now taking place at all levels of government, to determine barriers to effective response, and to make recommendations for future actions for overcoming those barriers to the White House, federal agencies, Congress, the states and local governments, interest groups, and other interested parties.

The following are preliminary recommendations. They are based upon the workshop discussions, the summaries from the breakout sessions, questionnaires submitted to workshop attendees, and suggested recommendations sent to us. The preliminary recommendations will be sent to all attendees from the workshops for their review and comment before a final set of recommendations are prepared and distributed approximately October 20, 1993. We would, therefore, expect some changes.

Summary of Recommendations

We recommend that the White House, federal agencies, and Congress:

1. Provide real alternatives to floodplain occupants and local governments in their choice of options in responding to flood damage and reducing future damages by providing more flexibility in the use of disaster assistance funds and allocating additional funds, if necessary, to broaden the range of alternatives to include relocation "buy outs", structural floodproofing, creation of greenways, wetland restoration and other alternatives.

The alternatives offered in the recovery must be real. For these alternatives to be real the following conditions need to be satisfied.

- They must be timely so that those displaced have a clear vision of their future. Mid-recovery rule changes must be avoided especially when they increase the anxiety of the recovery victims.
- Priority items such as relocation of communities, and restoration of open space will be expensive and will exceed the resources currently funded to pursue these opportunities. Agencies should be given the flexibility to reprogram existing emergency funds towards these efforts.

More specifically we recommend:

- Amend P.L. 103-75 (107 Stat. 739) to provide the Federal Emergency Management Agency, the U.S. Corps of Engineers, the Department of Housing and Urban Development and the Soil Conservation

Service with more flexibility in the use of funds to provide landowners and local communities with real choices for post flood response for "buy outs", relocation, floodproofing and other nonstructural floodplain management where such alternatives would equal or reduce the long- term federal costs associated with structural flood loss reduction measures.

- Provide additional funds in any disaster supplemental bill (should one be adopted) for "buy outs", relocation, floodproofing, nonstructural alternatives, and technical assistance. A portion of this money might involve a reallocation of funds not presently being spent pursuant to 103-75. Particularly high priority programs would include the Corps's Section 99 (if more flexibility were available in use of funds) and 1135 programs, H.U.D.'s Community Block Grant Program, FEMA's Section 404 Mitigation Grant Program, SCS's Watershed and Wetland Reserve Program, the U.S. Fish and Wildlife Service's Partners for Wildlife Program, and the National Park Services' Rivers and Trails Program.
- Direct the USDA to examine and provide recommendations for a policy that evaluates swapping agricultural set aside lands from upland to floodplains. This policy while complex, warrants consideration since it provides a federal no cost alternative to farmers that economically need to produce a crop on flood prone land, but in the long-term may be able to shift or abandon that practice eliminating the need for flood control or agricultural disaster relief. Many farmers believe that upland farmers would be willing to exchange these credits since it may be economically attractive for them to farm the land than to accept the set aside payment.
- Direct the federal agencies to provide additional technical assistance with regard to the full "menu" of options for reducing future flood losses while, simultaneously, achieving a broad range of pollution control, recreation, economic alternatives for the Mississippi basin. We believe that SCS and the U.S. Fish and Wildlife Service should have the lead for rural, agricultural areas and FEMA, H.U.D., the Corps of Engineers, and the National Park Service, Rivers and Trails Program, should have the lead for urbanizing and urban areas.

2. Create a flood clearing-house and improve and tailor the delivery mechanisms for technical assistance, grant-in-aid, and other forms of assistance to the needs of various groups affected by flooding and more actively involve these groups in formulating and implementing long-term solutions.

More specifically, we suggest that:

- The federal agencies develop a package of information on all major federal grant-in-aid and technical assistance programs and distribute them widely to landowners and local governments,
- The federal agencies in cooperation with the states develop specific packages of information and technical assistance for the two major "communities" affected by flooding: (1) agricultural community, and (2) urban residents and local governments.
- The federal agencies in cooperation with the states provide community planning assistance to help communities develop and implement post disaster multi-objective river corridor plans. Strong citizen and interest group involvement is needed in the development of these plans.

3. Rapidly develop certain types of "priority" information and data critical to short and intermediate flood responses including more information concerning levees and wetland restoration sites.

More specifically, we suggest that:

- Federal agencies be directed to develop within 60 days preliminary information concerning all levees affected by this flood disaster including types, lengths, design standards, damage from flooding, types of structures and activities protected by the flooding, costs of repair, and possible impact on potential restoration sites. The Corps of Engineers should have the lead on this.
- Federal agencies be directed to develop within 60 days a preliminary inventory of "restoration" sites in the areas affected by the flood disaster including but not limited to potential sites for greenways and urban parks in urban areas, and wetland and riparian zone restoration sites. The U.S. Fish and Wildlife Service should have the lead on this.

4. Establish demonstration projects to show how processes can work and determine the effectiveness of various approaches.

More specifically, we recommend that demonstration projects be established including:

- At least five community planning sites involving "buy outs", relocation, urban renewal, or greenways in urban and urbanizing areas,
- At least five sites involving wetland restoration, riparian zone restoration, buy outs and other forms of restoration in rural areas.

- At least five sites involving integrated floodplain, wetland and watershed management.

5. Provide planning and technical assistance to states and communities.

The recovery options being discussed with this recovery are state and community intensive. To succeed, they will require strong, on the ground, planning and implementation. Small and medium communities specifically lack the planning resources to facilitate these efforts. This lack of resource is compounded by the fact that entire communities have fallen victim to the flood, so the community planners are having to deal from the difficult role of victim and visionary. Communities need planning and technical assistance support in helping shape their recovery plans. See recommendations 1-4, 6, and 7 which will all assist states and communities.

6. Treat flooding in the upper Mississippi basin as a prototype or "case study" to suggest possible future directions for multi-objective floodplain and watershed management and the restoration of aquatic ecosystems in other areas of the nation.

- Initiate a National Academy of Sciences Committee concerning flooding on the Mississippi, its causes, and long-term multi-objective management strategies.
- Request the Interagency Floodplain Management Task to make recommendations with regard to multi-objective floodplain and watershed management planning and restoration of the upper Mississippi.

7. Establish a "blue ribbon" commission as a first step in designating the upper Mississippi and its sub-basins as a special, multipurpose watershed planning, management, and restoration area with the goal of rebuilding communities (both human and natural).

More specifically, this commission and the resulting designation should serve as a national model for a new concept of infrastructure development with the goals of revitalizing towns and agricultural communities, creating jobs, and restoring natural ecosystems. Public works projects should be formulated with a geomorphic and hydrologic/ecosystem basis. The commission should include representatives appointed by the Governors, from cities and towns, from federal agencies, and from the scientific and design communities. The commission should report back to the White House and Congress within one year.

83-034 O - 94 - 9

Testimony before the
House Subcommittee on Water Resources and the Environment

27 October 1993

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Introduction

My name is Dr. Richard E. Sparks and I am Director of the River Research Laboratories of the Illinois Natural History Survey. One laboratory is located on the Illinois River at Havana, Illinois, and the other is located in Wood River, Illinois on the Mississippi River near St. Louis. The Illinois Natural History Survey has conducted research on the biological resources of Illinois and the Midwest for 135 years. Our main offices are located on the campus of the University of Illinois in Champaign, and we have had a permanent research site on the Illinois River for 99 years and a newer station on the Mississippi for 4 years. Both stations are part of the Long Term Resource Monitoring Program on the Upper Mississippi River, funded by annual appropriations to the Corps of Engineers and by state contributions, and administered jointly by the Corps, the U.S. Fish and Wildlife Service, and the 5 states bordering the Upper Mississippi.

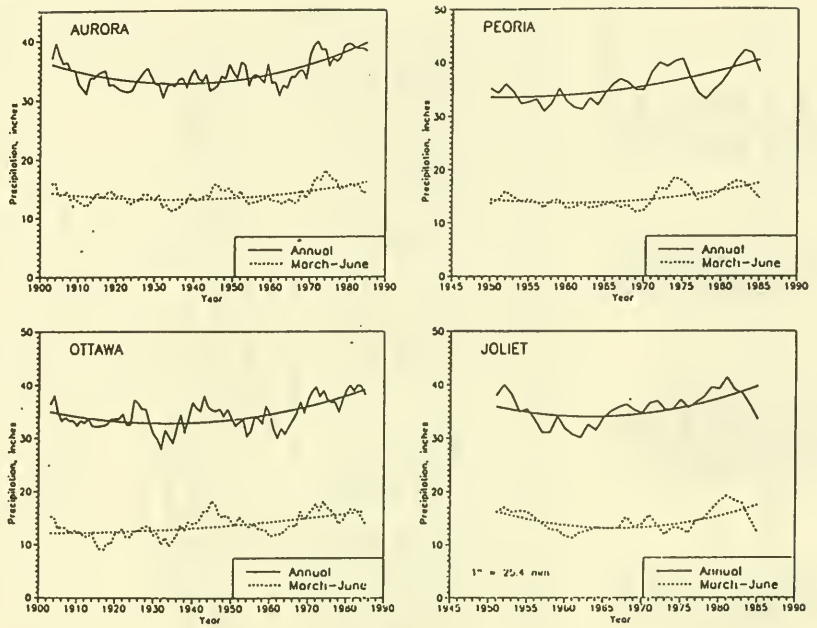
Overview

Trends in rainfall and in flooding over the past 100 years, including the Great Flood of 1993, indicate that flood-related damages will increase in the future, unless we change the way we manage water in the Upper Mississippi River Basin. Although long-term reduction of flood damages is certainly reason enough to make changes, there is another powerful reason: the Illinois, Mississippi, and Missouri rivers represent a world class of large river-floodplain ecosystems that were uncommonly productive, in terms of fish and wildlife, and are now increasingly rare worldwide, because of centuries of alteration in Europe and because of increasingly rapid alterations in the developing countries. The biological productivity of these river-floodplain ecosystems depends on seasonal floodpulses, which the plants and animals are adapted to exploit. Greater use of the water-retaining capacity of uplands and greater use of the floodplain for its natural functions of conveying and storing flood waters would not only reduce flood damages in the future, but would maintain and restore the Upper Mississippi River System, which Congress has recognized as a nationally significant ecosystem (Public Law 99-662, Water Resources Development Act of 1986, Section 1103, (A)2). A careful assessment should be made of all the natural and human factors contributing to the 1993 flood. Such an assessment will most likely support the recommendations of the Interagency Task Force on Floodplain Management and the National Research Council's recommendations on restoration of river-floodplain ecosystems, wetlands, and riparian zones (Johnston 1989; National Research Council 1992).

Top Ten Floods of Record by Volume, on the Mississippi River at St. Louis, MO.

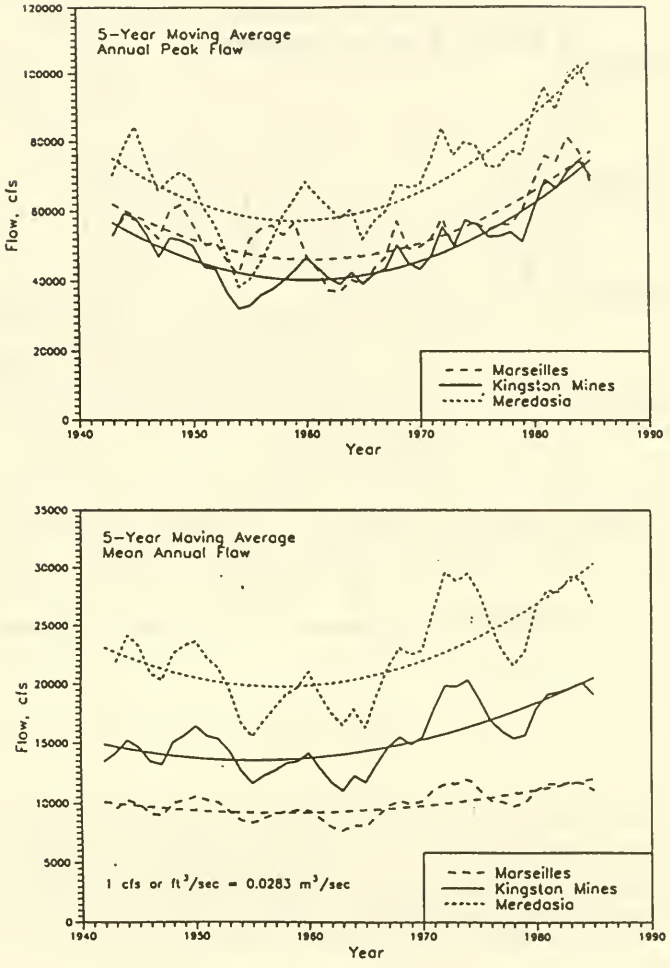
Rank	Date	Cubic Feet Per Second	River Stage (in feet)	Type of Flood	River-stage Rank
1	June 27, 1844	1,300,000	41.32	500-year	3
2	August 1, 1993	1,030,000	49.47	?	1
3	June 10, 1903	1,019,000	38.00	100-year	10
4	May 19, 1892	926,500	36.00	50-year	#
5	April 26, 1927	889,300	36.10	40-year	#
6	May 3, 1883	862,800	34.80	30-year	#
7	July 15, 1909	860,600	35.25	30-year	#
8	April 28, 1973	852,000	43.30	30-year	2
9	June 20, 1908	850,000	34.95	25-year	#
10	April 30, 1944	844,000	39.14	25-year	7

Table 1. The top ten floods of record by volume, on the Upper Mississippi River at St. Louis, Missouri. The rank by volume (third column) does not correspond to the rank by flood height (last column), indicating that the relationship has changed through time. Although the 1993 flow was about 20% less than the record flow of 1844, the 1993 crest was 20% greater (about 8 feet) than in 1844. The 1903 flow was just slightly less than the 1993 flow, yet the 1993 crest was 11.47 feet greater than the 1903 crest. The 1973 stage was the second highest on record, yet the flow only ranks 8th. The 1973 flood stage at St. Louis has recently been downgraded from a 100-year or even a 200-year event to only a 30-year event, meaning that great floods now occur with increasing frequency. Another indication that flood heights are increasing is that flows that rank fourth through ninth do not even rank in the top ten in terms of flood height (indicated by a # in the last column), if they occurred prior to 1928. Source: U.S. Army Corps of Engineers and U.S. Geological Survey, as reported in Rasmussen 1993b.



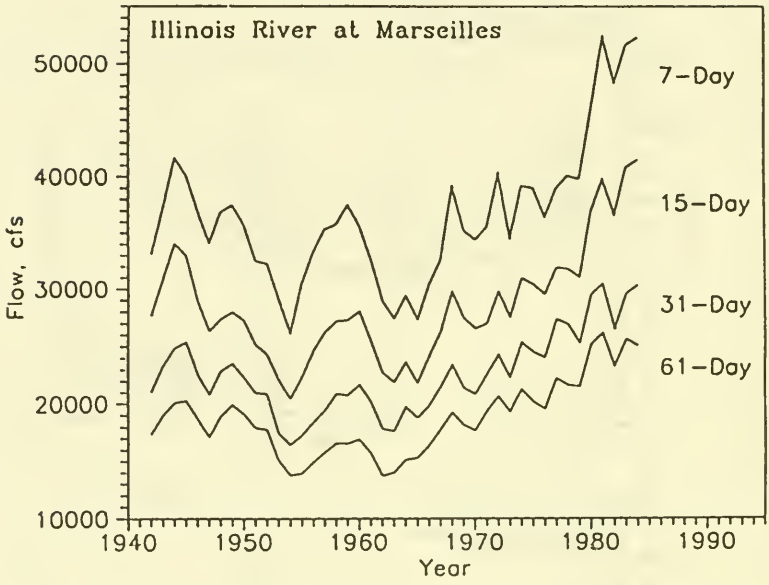
5-Year Moving Averages of Annual and Seasonal Precipitation

Figure 1. The average annual precipitation and the precipitation during the typical flood season of March-June has increased at four weather stations on the upper Illinois River. Source: Singh and Ramamurthy 1990.



Mean Annual Flows and Annual Peak Flows in the Illinois River:
5-Year Moving Averages and Trend Curves

Figure 2. The annual flows and peak flows at three gaging stations on the Illinois River have increased since 1940. Source: Singh and Ramamurthy 1990.



5-Year Moving Averages of 7-, 15-, 31-, and 61-day High Flows

Figure 3. The volume of high flows that last from 7 to 61 days has increased on the Illinois River. High flows that last weeks or more increase pumping costs in levee districts. For every 1000 cubic feet per second (cfs) increase in the high flow value, the pumping cost per acre increases by about 10 cents. If high flows occur during the critical planting period, when spring rains are apt to occur, the pumping costs can be as high as 40 to 45 cents per acre. Source: Singh and Ramamurthy 1990.

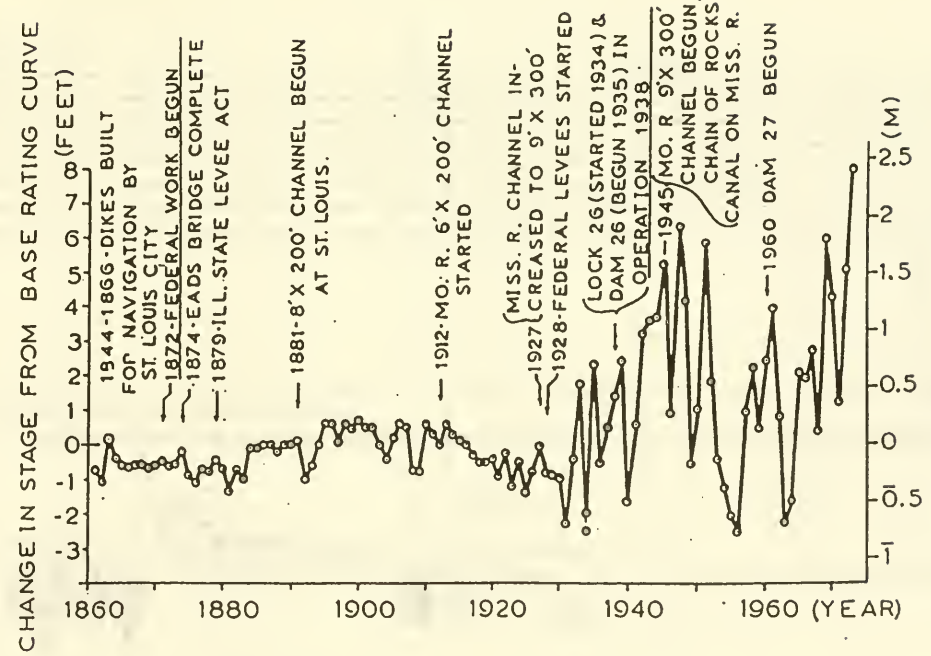
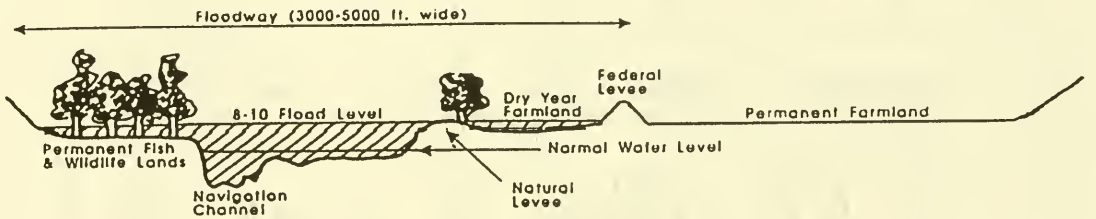


Figure 4. At St. Louis, the relationship between Mississippi river stage and river flow was relatively stable and predictable from 1861 to 1927, but fluctuated increasingly after that, with the lows becoming lower and the highs higher than in the 1861-1927 period. The river evidently entered a period of disequilibrium following construction of federal levees and the nine-foot navigation channel. Source: Belt 1975.



Hypothetical floodway showing various possible land uses. Any mix of the navigation channel and other land use could occur along any given river reach.

Figure 5. Hypothetical channel and floodplain showing various land uses. Some of the floodplain is left in fish and wildlife refuges and some in agricultural land that can be farmed in dry (nonflood) years. Once every 8-10 years, a major flood covers the refuge and the dry-year farmland, and the unleveed portion of the floodplain can fulfill its natural functions of providing spawning and nursery areas for fishes and conveying and storing floods. Flood heights are consequently reduced on the remaining leveed areas, including cities with flood walls. Farmers are paid for flood easements, or receive payments for crop losses on the dry-year farmland. Another alternative is to issue certificates to floodplain farmers who exchange them for an equivalent acreage of upland farmland that is currently in the set aside program. One continuing problem, unless soil erosion and sedimentation are brought under control, is that the unleveed floodplains continue to fill with sediment, thereby reducing flood capacity and increasing the hydraulic head against the levees. The land in some levee districts is actually below the average low water level in the river. Source: Rasmussen 1993a.

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON WATER RESOURCES
AND ENVIRONMENT

RELOCATION LEGISLATION
INTRODUCED BY
CONGRESSMAN HAROLD L. VOLKMER

103RD CONGRESS, FIRST SESSION
OCTOBER 27, 1993

STATEMENT OF THE HONORABLE
HAROLD L. VOLKMER M.C.

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to appear before you today to testify on H.R. 3012, introduced by myself and several of our colleagues. H.R. 3012 will provide relocation assistance for the people that were effected by the recent flooding in the midwest. As you may know, I have a particular interest in this legislation because portions of all the counties that I represent along the Mississippi and Missouri Rivers were flooded and received Presidential Declarations for Individual Assistance and Public Assistance. I have seen firsthand the damage caused by this summer's floods which enundated entire towns and fields. Businesses were closed and farmland that once produced bountiful crops were turned into mud bogs and sand bars.

Mr. Chairman I have traveled extensively throughout my district since early spring, when the first flood began to exact its heavy toll on the levees, homes, and property in the floodplain. Levees that have withstood years of flooding gave way this year to the heavy rains. Homes that have not been affected by high water before were flooded. In my state of Missouri estimates for flood related damage have exceeded $3 billion and are still rising as the damage assessment continues. Many areas in my district have not had just one flood but a succession of two or three separate floods this year. The city of Alexandria in the northeast corner of my district was one of

the first towns to be flooded and was one of the last cities to have the water recede. The reports shown on the television gave an impersonal view of the devastation caused by the floods. The television revealed flooded fields, houses and businesses under water, but they failed to show how the lives of the flood victims changed. Thousands of people could no longer go home at night after a days work because their homes were flooded. Many more were without clean drinking water and electrical power. The flood water has receded for now, but it will rise again, clean drinking water and electrical power have been restored and the great flood of the midwest is no longer making national headlines. However, for many life is far from its normal routine, people are still unable to move into their homes because of water damage and the arduous task of cleaning and rebuilding after the flood has not been completed. The constituents that I have talked to are anxious to rebuild their lives. For many the only option currently available is to use the money they receive to rebuild in the floodplain either because government programs are not flexible enough to assist them with a relocation project or they can not afford to relocate on their own.

Many of the people that live in the floodplain do not live there because they want to, they live there because it is what they can afford. Men and women that had their homes damaged or destroyed by the flood have come forward and said they would move out of the floodplain but they do not have sufficient funds to do so. If the property could be purchased at its pre-flood value there is no question that many would use this opportunity to leave the floodplain.

In a recent trip back to my district I drove through what remains of the city of Alexandria. I stopped and talked with Ed Smeltser Jr. who was stripping and cleaning his home. Mr. Smeltser informed me that he evacuated his home in the first week of July. The levee protecting the city and surrounding areas broke on July 8th. He and his family are currently living in temporary housing provided by FEMA in a town a few miles away. Alexandria was under up to 12 feet of water from the eighth of July to the middle of September. As we were talking I told him of the

relocation legislation that I introduced and how it would effect him. Mr. Smeltser said he would gladly sign up for a project that would move him and his family out of the floodplain. Many people have approached me wanting help to put their lives back in order. They informed me of their willingness to relocate out of the floodplain but many of my constituents cannot afford to relocate because it is not financially feasible. Currently, Individual and Family Grants are available from FEMA for up to $11,900 to help cover the costs of elevating and rebuilding in the floodplain. Federal money for relocation is available from two sources, Section 1362 of the National Flood Insurance Program (NFIP) and Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. As it now stands, few people will be able to participate in the Section 1362 buyout because such a low percentage of people are enrolled in the National Flood Insurance Program and the program has stringent requirements that make it difficult to relocate unless a property has suffered damage three or more times or more in a five year period or suffered damage of 50% or more once. Use of Hazard Mitigation grant money in Section 404 is limited because many of the areas that have been affected by the flood can not afford the 50%/50% match that is in present law. Total funds available for Section 404 are limited to 10% of the funds allocated for Section 406 (Public Assistance).

H.R. 3012 will amend Section 404 of the Stafford Act by changing the current 50%/50% Federal/State cost share to a 75%/25% Federal/State cost share. It will also raise the current Federal funding for the Hazard Mitigation Grant Program limitation from the current 10% of the estimated aggregate amounts to be made under Section 406 to 15%. In order to receive Hazard Mitigation Grant money eligible municipalities and counties must enter into an agreement with the Director of the FEMA that all existing structures will be demolished and make assurances that all of the properties acquired under the project will be dedicated in perpetuity to uses which adhere to accepted flood plain management practices.

The Executive Comment received by FEMA stated "the Administration supports the basic

concepts of this bill, as it would strengthen the ability of the Federal Emergency Management Agency (FEMA) to encourage hazard mitigation, which is the Agency's highest priority." I support the changes suggested by the Administration even though it will place limits on the amount of money that could be used for hazard mitigation. I feel that H.R. 3012 with the changes suggested by the Administration will provide an opportunity for the flood victims to move from the floodplain while reducing the continued need for Federal dollars to be spent for emergency services and rehabilitation of personal and public property.

It is very apparent to me rather than encouraging people to spend Federal money to rebuild in the floodplain it would be fiscally responsible to use that money to relocate especially when their preference is to leave the floodplain.

Harold L. Volkmer
VOLKMER

Hannibal, Missouri, Dwellings in the flood Plain -

PROPERTY ADDRESS	STRUCTURE	LAND	TOTAL (Assessed Value x 3)
512 SYCAMORE	$7,610.0	$547.0	$8,157.0
713-715 S. MAIN 20-10-8-28-3-19-010	$3,370.0	$314.0	$3,684.0
509 S. MAIN 20-10-8-28-3-18-014	$3,320.0	$364.0	$3,684.0
506 S. MAIN 20-10-8-28-3-01-002	$2,020.0	$300.0	$2,320.0
448 S. 7TH 20-10-8-28-3-18-008	$4,650.0	$350.0	$5,000.0
719 S. MAIN 20-10-8-28-3-18-008	$1,930.0	$175.0	$2,105.0
311 ADAMS 20-10-8-28-4-03-002	$5,080.0	$1,762.0	$6,842.0
1056 COLFAX 20-10-9-29-4-45-002	$8,550.0	$5,134.0	$13,684.0
608 ELY 20-10-8-28-3-25-016	$1,130.0	$712.0	$1,842.0
609 ELY 20-10-8-28-3-26-006	$7,420.0	$474.0	$7,894.0
614 ELY 20-10-8-28-3-25-010	$1,130.0	$712.0	$1,842.0
615 ELY 20-10-8-28-3-26-004	$3,740.0	$470.0	$4,210.0
710 ELY 20-10-8-28-3-24-060	$11,113.0	$6,534.0	$17,647.0
827 ELY 20-10-8-28-3-29-011	$3,260.0	$2,529.0	$5,789.0
901 ELY	$4,610.0	$1,705.0	$6,315.0

0-10-8-28-3-29-015			
325 WARDLAW 0-10-9-32-1-11-002	$5,770.0	$546.0	$6,316.0
720 LEMON 0-10-9-32-1-09-008	$7,820.0	$1,653.0	$9,473.0
106 MAHONEY 0-10-8-28-3-25-012	$4,380.0	$620.0	$5,000.0
108 S. MAIN 0-10-8-28-3-04-002	$5,630.0		
505 S. MAIN 0-10-8-28-3-18-015	$6,070.0	$220.0	$6,290.0
711 S. MAIN 0-10-8-28-3-19-011	$2,490.0	$931.0	$3,421.0
712 SYCAMORE 0-10-8-28-3-19-006	$3,020.0	$664.0	$3,604.0
714 S. MAIN 0-10-8-28-4-02-004	$2,490.0	$931.0	$3,421.0
1105 WOODROW 0-10-9-29-4-50-004	$17,520.0	$638.0	$18,150.0
717 S. MAIN 0-10-8-28-3-19-009	$930.0	$385.0	$1,315.0
521 S. MAPLE 0-10-9-29-4-48-001	$1,460.0	$118.0	$1,578.0
718 S. MAIN 0-10-8-28-4-02-006	$1,670.0	$961.0	$2,631.0
1101 WOODROW 0-10-9-29-4-59-003	$5,950.0	$1,418.0	$7,368.0
1129 WOODROW 0-10-9-29-4-50-008	$2,300.0	$1,647.0	$3,947.0
320 FULTON (REAR) 0-10-8-28-4-03-009-01	$3,390.0	$820.0	$4,210.0
718 SYCAMORE	$11,860.0	$327.0	$12,187.0

0-10-8-28-3-19-007			
01 SYCAMORE 20-10-8-28-4-04-001	$4,380.0	$883.0	$5,263.0
711 SYCAMORE 20-10-8-28-3-20-011	$4,940.0	$586.0	$5,526.0
702 SYCAMORE 20-10-8-28-3-19-004	$8,450.0	$234.0	$8,684.0
414 MUNGER 20-10-9-29-4-41-007	$8,540.0	$670.0	$9,210.0
419 MUNGER 20-10-9-29-4-39-021	$4,720.0	$1,332.0	$6,052.0
1237 LEDFORD 20-10-9-29-4-39-004			
410-412 JEFFERSON 20-10-8-28-3-16-004	$1,220.0	$359.0	$1,578.0
408 JEFFERSON 20-10-8-28-3-16-005	$2,110.0	$258.0	$2,368.0
316 JEFFERSON 20-10-8-28-3-03	$3,490.0	$457.0	$3,947.0
909 ELY 20-10-8-28-3-29-017	$3,640.0	$1,623.0	$5,263.0
903-905 ELY 20-10-8-28-3-29-016	$4,570.0	$1,482.0	$6,052.0
1050 COLFAX 20-10-9-29-4-45-002-010	$8,050.0	$2,476.0	$10,526.0
430 S. 7TH 20 10-8-28-3-12-12	$9,960.0	$303.0	$10,263.0
400 JEFFERSON 20-10-8-28-3-16-007	$5,220.0	$306.0	$5,526.0
402 JEFFERSON 20-10-8-28-3-16-006	$2,130.0	$238.0	$2,368.0
616 SYCAMORE	$2,050.0	$318.0	$2,368.0

0-10-8-28-3-18-008			
06-708 SYCAMORE 0-10-8-28-3-19-005	$5,470.0	$845.0	$6,315.0
20 FULTON 0-10-8-28-4-03-008	$4,000.0	$1,842.0	$6,042.0
12-814 SYCAMORE 0-10-8-28-4-03-007	$6,260.0	$845.0	$7,105.0
10 SYCAMORE 0-10-8-28-4-03-006	$6,670.0	$961.0	$7,631.0
08 SYCAMORE ART OF 20-10-8-28-4-005	$6,850.0	$952.0	$7,802.0
06-808 SYCAMORE ART OF 20-10-8-28-4-005	$1,363.0	$952.0	$2,315.0
06 SYCAMORE ART OF 20-10-8-28-4-005	$5,771.0	$952.0	$6,723.0
04 SYCAMORE 20-10-8-28-4-03-005	$7,997.0	$952.0	$8,949.0
00 SYCAMORE 20-10-8-28-4-03-003	$8,220.0	$1,253.0	$9,473.0
02 SYCAMORE 20-10-8-28-4-03-004			
1104 COLFAX 20-10-9-29-4-46-001	$6,910.0	$4,142.0	$11,052.0
504 ELY 20-10-8-28-3-25-004	$2,990.0	$431.0	$3,421.0
615-617 COLLIER 20-10-8-28-3-12-006	$3,640.0	$570.0	$4,210.0
1120 WOODROW 20-10-9-29-4-49-007	$4,000.0	$1,263.0	$5,263.0
1222 WOODROW 20-10-9-29-4-48-003	$2,630.0	$791.0	$3,421.0
1201 WOODROW	$1,770.0	$1,651.0	$3,421.0

0-10-9-29-4-50-009			
TOTAL	$299,694.0	$63,088.0	$358,951.0

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103D CONGRESS
1ST SESSION

H. R. 3012

To provide relocation assistance in connection with flooding in the Midwest, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

AUGUST 6, 1993

Mr. VOLKMER (for himself, Mr. SKELTON, Mr. GEPHARDT, Mr. CLAY, Mr. WHEAT, and Ms. DANNER) introduced the following bill; which was referred to the Committee on Public Works and Transportation

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A BILL

To provide relocation assistance in connection with flooding in the Midwest, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Comprehensive Cost Effective Relocation Act of 1993".

SEC. 2. HAZARD MITIGATION.

(a) FEDERAL SHARE.—Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170c) is amended by striking "50 percent" and inserting "75 percent".

(b) TOTAL CONTRIBUTIONS.—Section 404 of such Act is further amended by striking "10 percent" and inserting "15 percent".

(c) APPLICABILITY.—The amendments made by this section shall apply to any major disaster declared on or after June 10, 1993.

SEC. 3. RELOCATION ASSISTANCE IN CONNECTION WITH MIDWEST FLOODING.

(a) INCREASE IN FEDERAL SHARE.—In providing hazard mitigation assistance under section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act in connection with flooding in the Midwest occurring in the 1-year period beginning on April 13, 1993, the President, acting through the Director of the Federal Emergency Management Agency, may contribute 90 percent of the cost of relocation projects which meet the requirements of subsection (b).

(b) TERMS AND CONDITIONS.—A relocation project shall be eligible for funding under subsection (a) only if—

(1) the recipient of such funding is an eligible applicant under the Hazard Mitigation Grant Program established under section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act;

(2) the recipient of such funding enters into an agreement with the Director of the Federal Emergency Management Agency under which the recipient provides assurances that—

(A) properties acquired under the project will be dedicated in perpetuity to uses which are compatible with accepted flood plain management practices; and

(B) new structures will not be erected on the flood plain other than (i) public facilities which are open on all sides and functionally related to a designated open space, (ii) rest rooms, and (iii) structures which are approved prior to construction in writing by the Director; and

(3) the recipient of such funding demonstrates that relocation assistance is unavailable from other sources.

(c) FUNDING.—For the purpose of funding relocation projects under subsection (a), the Director of the Federal Emergency Management Agency is authorized to waive the limitation on total contributions for hazard mitigation measures established by section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by this Act, except that in no case may such con-

tributions exceed 10 percent of the estimated total amount of Federal disaster assistance to be provided under such Act in connection with flooding described in subsection (a).

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House Committee on Public Works
Washington, DC
Testimony
October 27, 1993

My name is Gilbert White. I am interim director of the Natural Hazards Research, Application and Information Center at the University of Colorado, Boulder, and an emeritus professor of Geography in the University's Institute of Behavioral Science.

I have studied problems of floods and floodplains since the middle of the 1930s when I was on the scientific staff of the Mississippi Valley Committee of the Public Works Administration, and subsequently served with the National Resources Committee and the Bureau of the Budget. After World War II I was a member of the Hoover commission task force on reorganization of government natural resources activities, vice-chairman of President Truman's Water Resources Policy Commission, chair of President Johnson's Budget Task Force on Federal Flood Control Policy that recommended Federal flood insurance, a member of the group that suggested the organization for FEMA, and chair of a review committee for last year's assessment of floodplain management in the United States.

Against that background, I suggest that the present situation with regard to flooding in the Midwest has much in common with previous experience but that it differs from earlier crises in major ways.

Like all previous great floods, the highwaters of 1993 generated public support for action to relieve the distress of flood sufferers and to improve the policies that had led to disaster. The floods of the 1850's provoked the engineering studies of Humphreys and Abbot that established a "levees only" approach to the alluvial valley of the Mississippi. It prevailed until the great flood of 1927 overtopped many of the levees and encouraged engineers to turn to floodways, cut-offs and reservoirs to assist in coping with extreme flood flows. More important in the long run, even before a new policy was established in 1928, the Rivers and Harbors Act of 1927 set in motion the so-called"308" surveys that laid the groundwork for basin-wide planning, thereby setting the pattern for later water management, most notably with the Tennessee Valley Authority plan in 1933.

The great floods of 1936-1937 in the Ohio and New England basins led to a basic change in Federal funding of reservoirs, and to the parallel authorization of complimentary works for soil conservation and forest watershed management. In the 1960s accumulating experience in other areas encouraged the Corps of Engineers floodplain information service for local governments and the establishment of a national flood insurance program. Then came a national emergency response agency dealing with a broad range of extreme events - natural and technological. Floods have continued over recent decades to account for a substantial, and usually the largest proportion of, annual property losses from natural disasters, but there have not recently been flood catastrophes like Hurricane Hugo or Andrew, causing high magnitude losses, to focus public and administrative attention. Today, the state of thinking and concern differs from that following previous disasters in at least three respects.

First, there is now a widely-held recognition among diverse sectors of the nation that a lasting economical, and sustainable solution to the flood problem preventing future catastrophes of the magnitude of 1993 can and must be achieved through integrated action. Experience has shown that it is not sufficient to depend upon engineering works alone, or flood proofing of structures or improved warnings or emergency disaster assistance or indemnification through an insurance system, or changes in land use, or restoration of once-lowlying wetlands. There are now enough places around the country to demonstrate that different combinations of those types of measures may be right for one landscape or community but not others. Primary reliance on any one set of measures throughout the country will be inadequate. In those instances where the actions have prevented major losses there may be little public attention. When the damages are minimized there is little to catch public interest.

Second, to an unprecedented degree, the various segments of our national society who often have pushed only for one favored solution are now coming to view the problems in a broader, more harmonious context. The levees vs. reservoirs argument of the 20s, the upstream-downstream controversy of the late 30s, the arguments over land use control or locally-suitable urban improvements are seen increasingly in a different light. Many segments are learning they have much to gain from practical appraisal of innovative adjustments to local environment and local community. It is no longer in many places a matter of environmentalists vs. engineers. In the Midwest there are approximately 200 communities that are seriously canvassing possible alternate ways of coping with flood threats.

Third, the major obstacle to working out reasonable, sustainable answers to the problems posed by these and other communities - urban and rural - is the habit and convenience of agencies working separately on their own narrow missions. It is easy to give lip service to working out community problems. It is more difficult to do so in practice. Were it not so, there would have been less inclination in the past to fasten on one measure, such as a levee or wetland restoration, without regard to others. Now, there is a meeting of the minds among Federal agencies in the Assessment report as to where they stand and where they should be going. And the state agencies are in a far better position to assist in an integrating capacity that ever before. FEMA finally is focussing on long-term mitigation as its central mission; the insurance program at last, is getting its act together. The time is ripe to tackle the flood problem in a unified fashion. What seems needed is resolve, a sense of constructive direction, and flexibility in tackling in a unified fashion the complex of government procedures required for effective floodplain management. To achieve this will require strong administration from the Executive Branch. It will need to be based on Congressional authorization for joint activity by the Federal agencies involved, and for flexibility in using appropriated funds to carry out designated activities on an experimental basis.

STATEMENT OF THE HONORABLE JAMES LEE WITT

FEDERAL EMERGENCY MANAGEMENT AGENCY

BEFORE THE

SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

U.S. HOUSE OF REPRESENTATIVES

OCTOBER 27, 1993

Good morning, Mr. Chairman and Members of the Committee. I am pleased to appear before you to present the Administration's comments on and support for the revised Comprehensive Cost Effective Relocation Act. I will also discuss the mitigation and floodplain management issues that we are confronting as we rebuild the flood ravaged Midwest.

The flooding that occurred in the Midwest was unprecedented in scope, magnitude and duration. The sheer numbers of victims, flooded homes and businesses, and damaged infrastructure demanded that emergency responders at the Federal, State, and local levels work as partners to bring needed assistance to the affected Region.

And I am proud to say that this partnership performed well.

During several visits to the Midwest, I was inspired by the determination and courage of the people of that region. Wherever we went, there was a spirit of community, of neighbors helping neighbors, united in a common cause to protect their homes, their livelihoods, their communities.

I remember joining a line of people filling sand bags to protect the historic town of St. Genevieve. People had been working 24 hours a day for 38 days straight trying to save this town. People had come from the community next door where they had already lost their town. There were volunteers from all over the United States. The outpouring of help was amazing.

The heroic efforts of the people of the Midwest provided inspiration to us all. But it also provides vivid evidence of the problems we face when we insist on challenging the forces of nature by our development and building practices.

Significant suffering and damages to homes and businesses in flood risk areas can be avoided through sound floodplain management and mitigation programs. Yet in many communities, this will not occur because of competing priorities for limited funds, and inconsistent Federal programs. These are the issues I want to discuss with you today.

What do I mean by mitigation? Mitigation includes those actions or programs that will reduce or eliminate loss of life, injury, and property damage from future natural disasters. For those responsible for making investments in mitigation--Governors, mayors, county commissioners-- the political support often isn't there. Or the short term economic costs can't be justified.

We are in a unique situation right now. The political support is there and the economic costs are justified. The opportunity is at hand to reduce significantly the number of people at risk from flooding in the United States. To do this the Administration and Congress must lead the way.

As the impacts of the flooding became evident, the Administration, at the direction of President Clinton, immediately began a coordinated effort to plan for the long term recovery of the Midwest. This interagency effort is addressing the complex economic and social issues resulting from the unprecedented flooding in the Midwest. Issues such as restoring economic vitality, agricultural production and recovery, appropriate use of the flood plain, and other environmental and health concerns.

Under direction of the White House, the approach has been to take a broad look at Federal programs, cross Agency lines and design innovative strategies to meet the needs of the citizens of the Midwest. This approach will allow us to apply limited resources in the most effective and efficient manner.

In doing so, we can be responsive to the problems facing the Midwest as they rebuild their communities. But also to look toward the long term economic, social and environmental goals.

The goal of this Administration, the goal of President Clinton, is to help the people of the Midwest rebuild their lives and to reduce the numbers of people and communities at risk from future flooding.

This will not be an easy task but the Administration is committed to it and we seek your support. I would like to share with you today some of the concerns that we are facing.

First, we have to reexamine Federal funding programs to State and local governments after a disaster. More critically, how these funds can be used for hazard mitigation programs after a disaster. Programs such as community buyouts or elevation of flood damaged structures.

Each department and agency-- including FEMA, Agriculture, Interior, COE, to name a few -- have different programs to provide support to State and local governments. Each of these programs have different rules on who, how, and what those programs can be used for. This situation creates confusion and often results in frustration on the part of local officials and disaster victims.

This serves to limit their usefulness in a combined and coordinated mitigation and recovery effort such as we have in the Midwest.

While we did apply innovative approaches in the Midwest, such as using the Individual and Family grant program to assist in elevation of structures, this was a short-term solution. We need to establish a long-term, flexible systems to support mitigation activities.

We need to provide support for non-structural flood control

and flood plain management programs so we can provide communities viable alternatives to rebuilding the levees.

As the Midwest demonstrates, it is time for the Federal government to work with State and local governments and the Congress to design a comprehensive program for community buyout and relocation in high risk areas.

I will make development of such a program a priority for FEMA, so we will be better prepared to serve victims and communities after the next flood disaster.

In this same context, we need to take a broad look at our Federal policies on levee repair and reconstruction. The issue of how to deal with damaged and failed levees became critical because of the widespread overtopping and the failure of urban and agricultural levees.

Primary responsibility for levee work falls upon the Army Corps of Engineers and the Soil Conservation Service. However, FEMA does have a limited role.

As I noted earlier, as part of the Administration's interagency effort, we have implemented a coordinated policy which states that non-structural alternatives to repairing levees should be offered to levee owners.

The policy also allows relevant agencies such as EPA and the Fish and Wildlife to play a role in the environmental review of levee restoration. This is working well in this disaster.

But from FEMA's perspective, we need to better define the policies for the post flood environment. We need to consider alternatives for balancing community flood protection, such as levee restoration with mitigation strategies such as buyouts and other environmental considerations.

These issues are actively under review by the Administration. This review will occur with extensive input from the States and close cooperation with Congress in setting future direction.

Another important issue that we faced in the Midwest, which has nation-wide implications, involves the availability of Federal funding for structural elevation in flood hazard areas.

When a community joins the National Flood Insurance Program, it agrees to enforce a flood plain management ordinance in exchange for the availability of Federal flood insurance throughout the community.

This ordinance requires that any structure that is "substantially damaged" after a flood must be elevated or

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floodproofed to at least the 100-year flood level. This provision is critical to our efforts to reduce the numbers of buildings subject to flood damage. Unfortunately, the costs of elevation are not covered under flood insurance policies.

We would like to work with this Committee and the Congress to resolve this problem. Our proposed solution would be to add a provision to our flood insurance policies that would provide coverage for the increased costs associated with complying with the elevation requirements.

Bill S.1405, which includes authorization of this coverage is currently under consideration in the Senate.

We would like to see this provision in any National Flood Insurance Program legislation. We are also looking at changes to the Stafford Act to create enhanced capabilities to accomplish mitigation.

A significant step to help people of the Midwest mitigate their flood risk was taken by Representative Volkmer when he introduced H.R. 3012, the Comprehensive Cost Effective Relocation Act. This legislation improves the buyout program for the Midwest and future disasters.

One of the most effective mitigation tools we have is public acquisition of flood-damaged property for permanent open space use, along with the relocation of affected individuals to sites outside of the flood hazard area.

The interest communities in the Midwest are showing in acquisition and relocation projects -- in community buyouts -- is unprecedented.

H.R. 3012 will help move people out of harm's way and reduce the cost to the American taxpayer from future flood disasters.

The Administration strongly supports the basic concepts embodied in H.R. 3012. We support increasing the Federal share of Section 404 grants to 75%. We support raising the cap for available funds from 10% to 15% of Sec 406.

Both of these changes will provide increased support to State and local governments to take mitigation actions; not only for floods but for other natural hazards as well.

For relatively minor expense now, we will save in disaster assistance costs and flood insurance payouts for the future.

We do have some suggestions on H.R. 3012 which we believe will enhance its positive impact on mitigation in this Nation. The Administration recommends deletion of subsections (a) and (c) of Section 3, which are applicable only to the current flooding in the

Midwest.

We also would propose that a third condition for acquisition and relocation be added. This condition would deny future Federal disaster assistance for facilities in areas acquired under the program.

Once again, I would like to compliment this Committee and the Congress for their foresight in moving forward on this important legislation.

We believe that this bill, with the minor changes we have discussed today will help us take a giant step forward in mitigation across this Nation.

In closing, I want to share with you some thoughts on our future direction at FEMA.

The time has come to face the fact that this Nation can no longer afford the high costs of natural disasters. We can no longer afford the economic costs to the American taxpayer, nor can we afford the social costs to our communities and individuals.

While we cannot control nature -- we will always have floods, hurricanes, and earthquakes. We do know how to control the corresponding losses.

We must and can work to design and build our communities better and to the extent possible, out of harm's way.

Mitigation must become a priority throughout all levels of government. We must be proactive on mitigation and not reactive. We cannot afford to wait for the next hurricane or the next earthquake before we provide support for mitigation.

In our rebuilding of FEMA, I have established a Mitigation Directorate to work more effectively with State and local governments to implement mitigation programs.

This is a first step. But we must do more. It is my intent to look toward a comprehensive national mitigation program that reduces human suffering, that reduces economic disruption, and that reduces disaster assistance costs.

We must look to applying mitigation measures on a proactive basis, independent of Presidentially declared disasters.

We must look at innovative ways to accomplish mitigation. Ideas like creating a Natural Hazards Mitigation Trust fund, establishing seismic safety enterprise zones, and partnerships with non-profits and the private sector.

Each of us has the power to be a leader of change and I want to work with you to make mitigation a reality in this country. It is time for each of us to assume responsibility for the future safety of our communities and our people.

I committed to doing that when I became Director of FEMA. I ask you to join with me in this effort today.

Thank you for this opportunity and I will be happy to answer any questions.

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